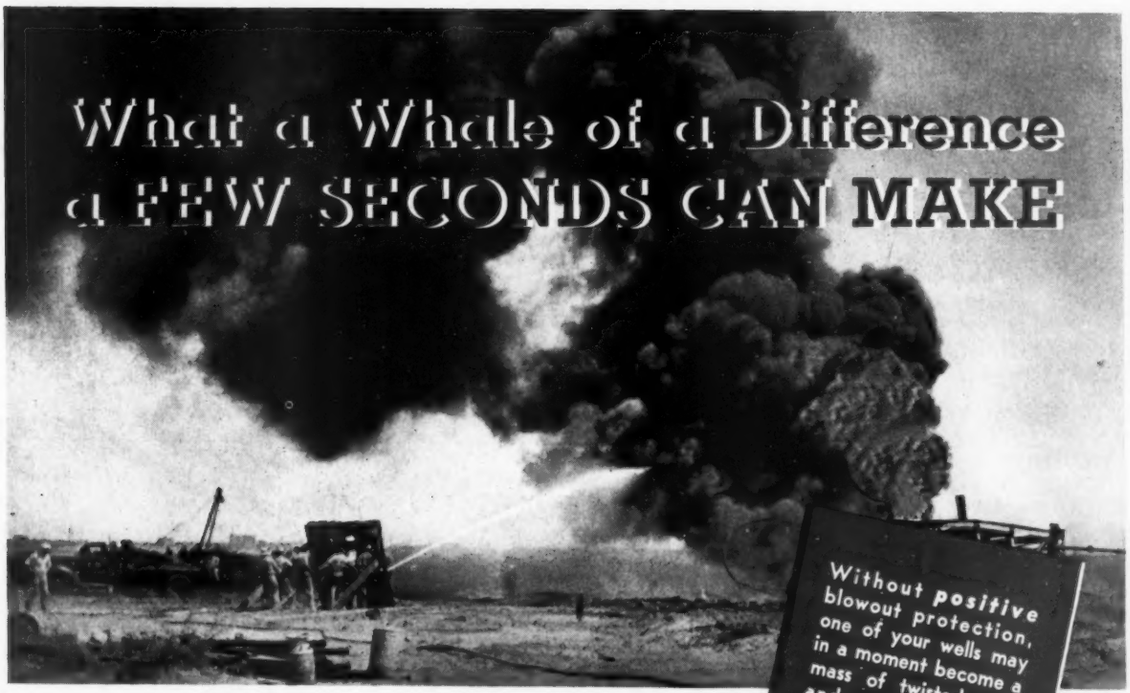
SEP 24 1937

the OIL AND GAS JOURNAL

PTEMBER 23
1937

PRICE
CENTS



Without positive blowout protection, one of your wells may in a moment become a mass of twisted ruins and writhing flames. Don't let this happen to your drilling wells. Install the "Blowout Preventer that Prevents."

PROTECT YOUR WELLS WITH THE

HYDRIL *Automatic*

BLOWOUT PREVENTER

STOPS THE BLOWOUT INSTANTANEOUSLY AND ALLOWS OPERATIONS TO CONTINUE WITHOUT INTERRUPTION!

SEND FOR NEW DESCRIPTIVE CATALOG.

HYDRIL COMPANY
714 WEST OLYMPIC BLVD., Los Angeles
4300 CALHOUN ROAD, Houston
CABLE ADDRESS: Hydril

Increase your profits with J&L STEEL

Gauging taper of threads on J&L Seamless Casing with automatic micrometer.

Your guarantee

that J&L Seamless Tubular Products meet your exacting requirements

When you buy J&L Seamless Tubular Products, you get the maximum in service. Long life, dependable strength, exact dimensions are assured by exhaustive inspection at every stage of manufacture.

Every fifth man in the Jones & Laughlin Seamless Tube Department works for you . . . in your interests . . . as if he were on your payroll. This man . . . *your man* . . . makes complete chemical and physical tests, compares wall and thread dimensions to accurate standards by precision methods, checks every length under heavy hydrostatic pressure.

This constant checking and inspecting is your *guarantee* that J&L Seamless Oil Country Goods are *the best that can be made.* With J&L Seamless, you get the maximum in long life . . . true threads . . . dependable wall strength.

Cut your drilling and setting time . . . save money through longer life and extra service . . . get lasting satisfaction. Buy Jones & Laughlin Seamless for all your needs.

JONES & LAUGHLIN STEEL CORPORATION

PITTSBURGH, PENNSYLVANIA

MAKERS OF HIGH QUALITY IRON AND STEEL PRODUCTS SINCE 1850

J&L PIPE

J&L SEAMLESS

DRILL PIPE · CASING · TUBING · LINE PIPE

the OIL AND GAS JOURNAL

PUBLISHED WEEKLY BY THE PETROLEUM PUBLISHING COMPANY AT TULSA, OKLAHOMA

VOL. 36, NO. 19 SEPTEMBER 23, 1937

P. C. LAUINGER
President

C. O. WILLSON
Editor

W. T. ANDERSON
Managing Editor

JAMES McINTYRE
Consulting Editor

W. T. ZIEGENHAIN
Engrg. Editor

L. G. E. BIGNELL
Prod. Engrg. Editor

C.K.FRANCIS,Ph.D.
Technical Editor

W. L. NELSON
Metallurg. Editor

Associate Editors

T. F. SMILEY
DAL DALRYMPLE
D. H. STORMONT
T. P. SANDERS
PAUL REED

District Editors

Houston
Sterling Bldg.
NEIL WILLIAMS
GEORGE WEBER
F. L. SINGLETON

Fort Worth
L. E. BREDBERG
Petroleum Bldg.

Shreveport
MITCHELL TUCKER
City Bank Bldg.

Los Angeles
L. P. STOCKMAN
Union Oil Bldg.

Washington
HENRY D. RALPH
Natl. Press Bldg.

Saginaw
O. C. PRESSPRICH
Saginaw News Bldg.

Denver
T. R. INGRAM
State Office Bldg.

New York City
H.STANLEY NORMAN
415 Lexington Ave.

Oil City
J. P. O'DONNELL
Derrick Bldg

Toledo
G. A. WHITNEY
P. O. Box 98

Chatham, Ontario
V. LAURISTON
Box 136

•

S. H. ROURKE
Business Manager

M. F. BALDWIN
Circulation Manager

•

Advertising

E. KLAPPENBACH
Advertising Manager

New York City
C. L. CAIN
415 Lexington Ave.

Cleveland
HOWARD MARKT
Leader Bldg.

Chicago
C. R. FARMER
300 W. Adams St.

Tulsa
K. J. LANGLEY
114 W. 2nd St.

Houston
WAYNE RIVES
Sterling Bldg.

Los Angeles
J. H. TINKHAM
1406 S. Grand Ave.

Cologne, Germany
A. J. CHAMBERS
1 Laudahnstrasse
Koln-Lindenthal

Table of Contents

NEWS DEVELOPMENTS

Summary 19
Pennsylvanian Basin of West Central Colorado Geologized—*By H. W. C. Prommel* .. 20
Future Business Regulation Main Topic Before N.P.A.—*By Henry D. Ralph* 23
Sparks From the News 24
Illinois Outlook Widening—*By Dorsey Hager* 25
Editorial 26
Soviet Reserves No Immediate Threat to World Oil Markets—*By William J. Kemnitzer* 27
Compact Commission to Meet During Houston Oil Show 32
Texas Allowable Cut 93,540 BBls. 35
National Safety Program for Kansas City Meeting 36
Refinery Expansion 38
Natural Gasoline News 38
Pipe Line Projects 39
Natural Gas News 39
Fourteen Subpoenas Issued for Madison Witnesses 40
News from Foreign Lands 42

ENGINEERING—OPERATING

Practical Methods Used to Prevent Corrosion From Mid-Continent Crude—*By Robert E. Puckett* 44
Solvent Extraction Principles as Applied to Continuous Countercurrent Operation—*By John W. Poole* 50
Carefully Planned Boiler Plant Feature of California Portable Drilling Rig—*By T. P. Sanders* 53
Install Section of Gasoline Line While Under High Pressure—*By D. L. Hines* 57
Preparation of Flooding Water to Prevent Plugging Oil Sand—*By Harry M. Ryder* .. 60
Operating Ideas 65
Problems From Readers—*By L. G. E. Bignell* 66
Technical Questions—*By C. K. Francis, Ph. D.* 69

FIELD OPERATIONS

Field Operations Summarized 71
Southwest Texas—*By George Weber* 72
Eastern Fields—*By Staff Correspondent* 74
Central West 75
Oklahoma—*By Dal Dalrymple* 78
California—*By L. P. Stockman* 81
Gulf Coast—*By F. L. Singleton* 83-95
Michigan—*By Otto C. Pressprich* 84
Rocky Mountain Area—*By T. R. Ingram* .. 85
Kansas—*By Dal Dalrymple* 89
East Texas—*By L. E. Bredberg* 93
West and North Texas—*By L. E. Bredberg* 96
Canada—*By Victor Lauriston* 100
North Louisiana-Arkansas—*By Mitchell Tucker* 103
Wildcat Operations 105-113

MARKETS AND PRICES

Crude Prices 82-122
Group 3 Market—*By D. H. Stormont* 118
A.P.I. Refinery Report 119
New York Market—*By H. Stanley Norman* 119
Tank-Wagon Markets 120
Refinery Prices 121

ADDITIONAL FEATURES

Oil Men's Calendar 113
Do You Remember? 116
Personal Paragraphs 116-117
Record of Oil Securities 123
New and Improved Equipment 124-125
Classified Advertising 126-127
Advertisers' Index 128

Rates: Domestic, 1 year, $6.00; 6 months, $3.00. Canadian and foreign, 1 year, $7.00; 6 months, $3.50. All subscriptions are payable in advance. Extra copies of special issues are reserved for subscribers' needs and may be purchased by subscribers at the price of 50 cents per copy.

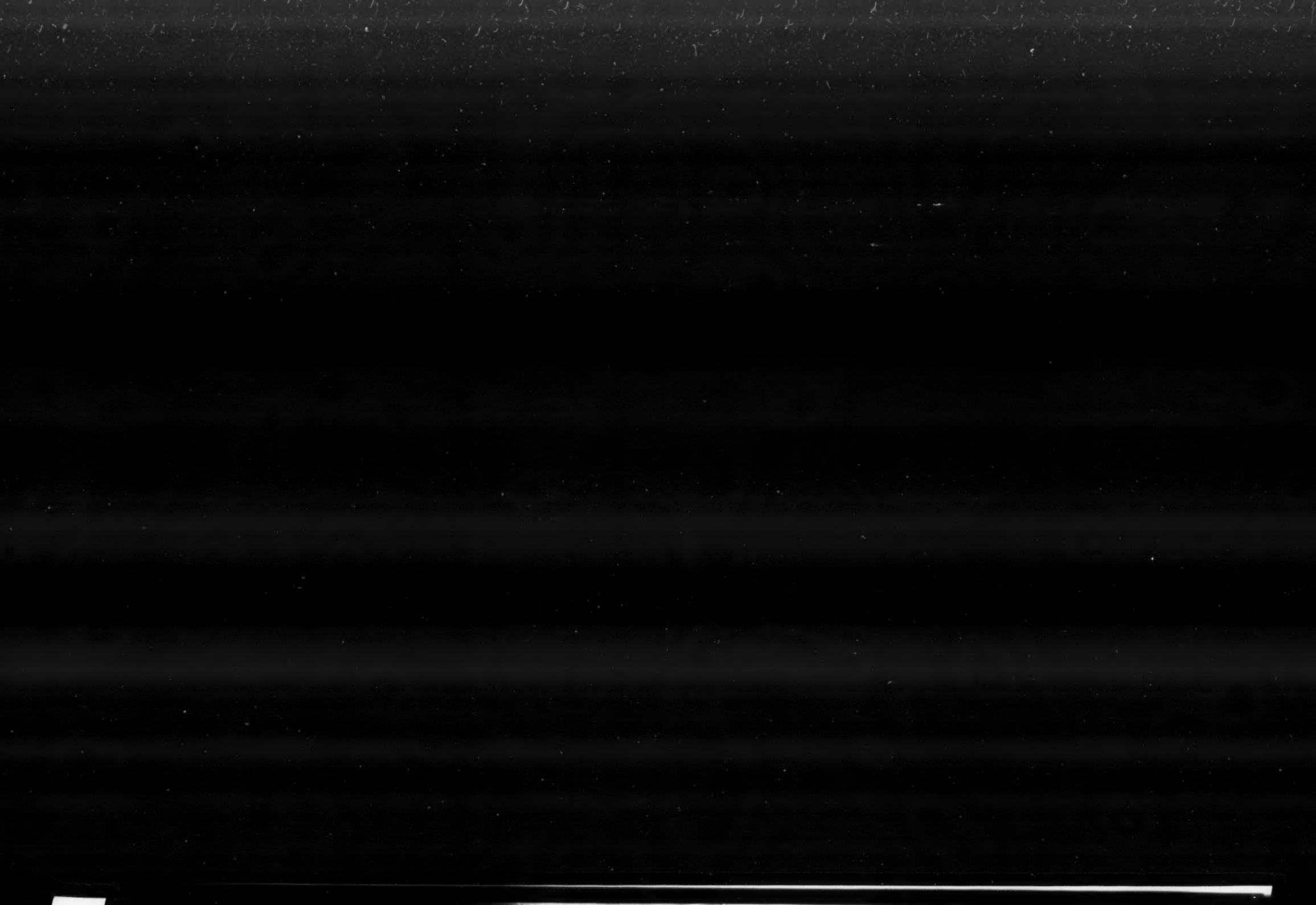
Copyright, 1937, by The Petroleum Publishing Company

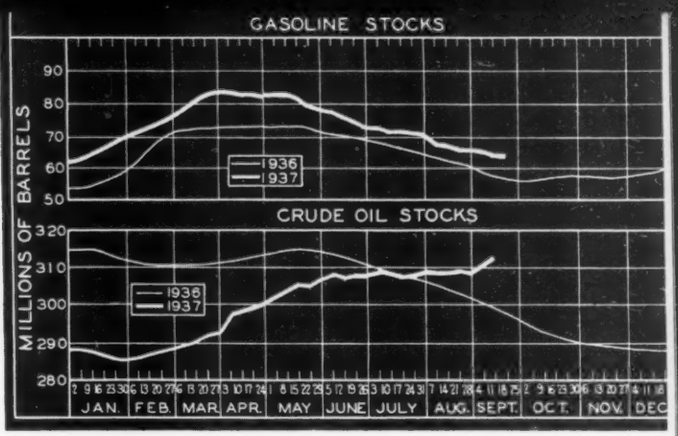
Refiners can depend upon the consistent uniformity of quality — the High Octane, Quick Starting, Carbon Free, Knockless elements so necessary to their blending requirements when they buy Warren's Stabilized Natural Gasoline.

We manufacture and sell only Natural Gasoline — have specialized in this important product for fifteen years. Our complete network of natural gasoline plants strategically located in Oklahoma, Texas, Kansas, Louisiana and New Mexico supports the company's adequate terminal storage and shipping facilities at seaboard.

Our communication, traffic, laboratory and administrative services have been built on experience, to synchronize its important physical facilities to better serve both its allied manufacturers and the Refining Industry.

WARREN PETROLEUM COMPANY
Tulsa, Okla., U. S. A.
MANUFACTURERS, EXPORTERS AND MARKETERS
Export Terminals: Port Arthur and Morgan City, Houston, Texas





Production

Up 49,877 Barrels

AFTER two weeks of decline, which, if continued at the same rate would have brought crude oil output down to somewhere near actual requirements by October 1, production went wild again last week. Kansas and Oklahoma produced 57,000 barrels a day of unwanted oil during the week and Texas and California produced an even greater quantity of crude for which purchasers cannot find a market. The surplus over refinery requirements added weight to a burden the purchasing companies were already bearing. Oklahoma production increased 4,675 barrels per day and Kansas production 7,075 barrels per day, a total of 11,750 barrels. Texas increased 11,098 barrels per day and California 14,000 barrels per day. An indication of the seriousness of the general crude situation was the action of the Gulf Oil Corporation in withdrawing as a purchaser from the Lisbon field in North Louisiana, and that of the Atlantic Crude Oil Purchasing Company in cutting its runs from Ward County, Texas, pools to 36 per cent effective on September 25. One of the large pipe line systems in Kansas has decided to take only the quantity of oil its pipe line system can handle without the necessity of storing crude, and another pipe line into that big district has started cutting down on its runs.

CRUDE PRODUCTION *3,676,006 barrels daily average—up 49,877 barrels.*

CRUDE STOCKS *311,780,000 barrels as of September 11—up 1,363,000 barrels.*

GASOLINE STOCKS *66,057,000 barrels as of September 18—down 399,000 barrels.*

REFINERY RUNS *3,400,000 barrels daily average past week—down 55,000.*

Oil buyers are looking to the state regulatory bodies for relief in October. There is a difference of opinion among them as to the quantity to be shaved off in Kansas and Oklahoma. The Railroad Commission of Texas on Tuesday made a deep cut in the October allowable in that state.

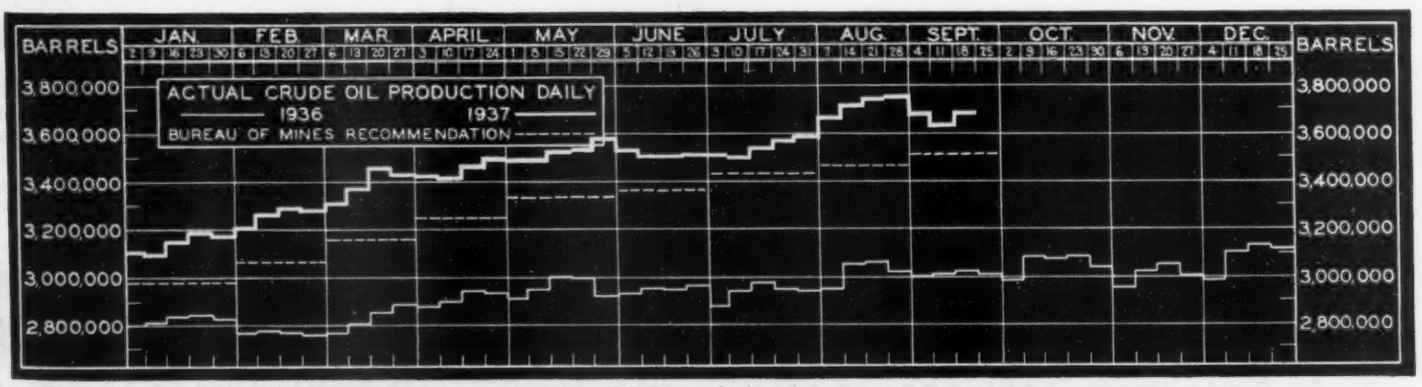
The United States Bureau of Mines has recommended a reduction in Oklahoma production in October to 629,200 barrels, or 4,200 barrels a day below the September recommendation. The bureau recommended a reduction in Kansas to 199,900 barrels a day, or 1,000 barrels below the September recommendation. The bureau increased its allowable recommendation in Texas 16,700 barrels per day, or to 1,430,300 barrels daily. The Texas Railroad Commission met in Austin on Monday of this week. The Kansas commission will meet September 24 to hear the purchasers and producers and the Oklahoma Corporation Commission will hold its hearing on September 28.

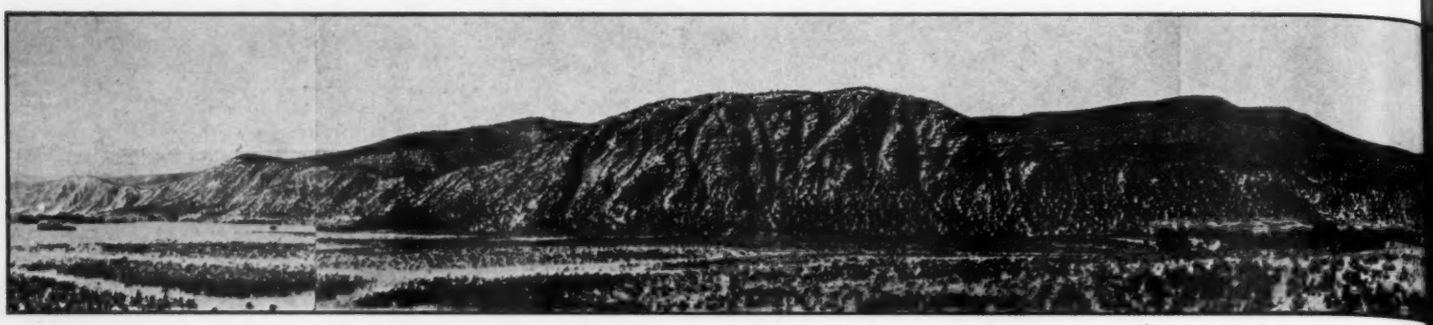
New pools are being opened weekly in the United States. Wells of large production were reported last week in New Mexico and Oklahoma, the Eunice pool in Lea County in the former named state having a new well of 20,000 barrels daily potential, and three large wells having been reported from the Billings Wilcox sand pool in Noble County, Oklahoma. The Noble pool in Richland County, Illinois, was extended.

Daily Average Production for Week

	Sept. 18, 1937	Bur. Mines Sept. est.	Sept. state allowables	Sept. 11, 1937
Oklahoma City	147,250	.....	.....	148,775
Fitts	86,175	.....	.....	82,900
Remainder of State	375,750	.....	.....	372,825
Total Oklahoma	609,175	633,600	600,000	604,500
East Texas	479,250	.....	.....	477,750
West Texas	223,698	.....	.....	222,900
North Central Texas	107,100	.....	.....	108,150
Texas Panhandle	82,297	.....	.....	70,693
East Central Texas	116,100	.....	.....	119,550
Gulf Coast--Texas	361,950	.....	.....	362,000
Southwest Texas	122,500	.....	.....	120,749
Total Texas	1,492,895	1,413,600	1,454,070	1,481,797
North Louisiana	88,070	.....	.....	86,080
Gulf Coast—Louisiana	173,200	.....	.....	169,850
Total Louisiana	261,270	247,900	265,495	255,930
California	694,750	638,200	638,200	680,750
Kansas	195,475	200,900	196,250	188,400
Arkansas	35,845	29,900	.....	36,580
Eastern Fields	139,500	124,300	.....	137,500
Michigan	52,516	40,400	.....	51,790
New Mexico	114,490	101,400	114,500	114,320
Rocky Mountain area	80,090	79,100	.....	74,562
Total United States	3,676,006	3,509,300	.....	3,626,129

Increase of 49,877 bbls. daily.





Red beds of Pennsylvanian and Permian age in synclinal area separating Cattle Creek and Roaring Fork anticlines. To left, the gypsiferous series near apex of Cattle Creek an... ley of Roaring Fork River, behind which lie timber-covered, low hills of the gypsiferous formation of Pennsylvania age, covered by basalt. The northern slope of Basalt mountain ... shows in far distance. The hill in the right distance in the center, as well as the slopes in front, are basalt covered. The plain in the foreground is ...

Pennsylvanian Basin of West Central Colorado Geologized

By H. W. C. PROMMEL
Consulting Geologist, Denver, Colo.

During the past 12 years extensive stratigraphic and structural studies have been carried on in southwestern Colorado and southeastern Utah by government, oil company and private geologists to determine thicknesses and sequences of formations and work out the geologic history and regional structure of that part of the Rocky Mountain region.

As a result, the approximate limits of the Paradox geosynclinal basin of southwestern Colorado and southeastern Utah have been fairly well determined; this basin is bounded to the southwest by the San Rafael Swell of Utah and to the northeast by the Uncompahgre uplift of Colorado which stood out as land masses during several geologic time periods.

Exploratory drilling in various parts of this basin has contributed to stratigraphic and structural studies and a petroliferous series of gypsum, anhydrite, salt, shale and sandstone of yet undetermined thickness, underlying the Hermosa formation of Pennsylvanian age, confined to this basin, has been named the "Paradox" formation by the committee on nomenclature of the U. S. Geological Survey. Drilling within this basin, to determine trends of possible shore lines and location of reservoir rocks for detention of oil from the highly petroliferous shales of the Paradox formation, is still being carried on; it should eventually reveal the oil possibilities of this potential petroliferous province. Continuous showings of oil and gas under high pressure by the original discovery well on Cane Creek anticline which blew out recently after having been cemented and abandoned eight years ago, after a four-year attempt to produce it, have kept up the interest in this isolated and extremely rugged region and have in a large measure been responsible for further search and geologic studies in adjoining regions.

This, together with studies by government geologists and others of the old Front Range highland bordering the backbone of the present Rocky Mountains to the East, has fairly well determined the extent and location of the old land masses within the western part of Colorado and has pointed to geosynclinal basins separating these old land masses. The principal structural features thus determined in western Colorado and eastern Utah are shown on Figure 1; it shows the presence of a geosynclinal basin, similar to the Paradox Basin, between the Uncompahgre-San Luis highland to the southwest and the Front Range highland to the northeast. On account of the location of Glenwood Springs near the center of this basin, it is temporarily referred to as the "Glenwood Springs Basin."

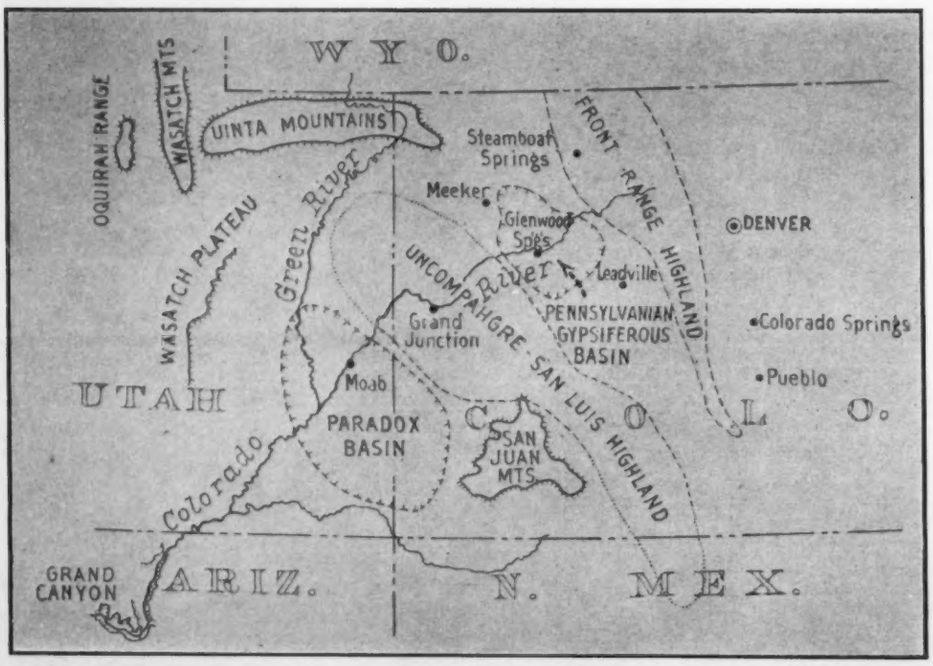
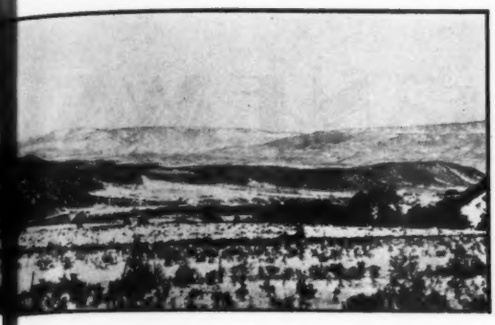


Fig. 1.—Uncompahgre-San Luis Highland, Front Range Highland, Paradox Basin, and Pennsylvania Gypsiferous Basin, Colorado and Utah. (After A. A. Baker, C. H. Dane, John B. Reeside, Jr., and V. J. Hendrickson)

Stratigraphy

Geologic formations in the Glenwood Springs Basin, while similar to those of the Paradox Basin, are nevertheless distinct and partly confined to the basin. The exact dividing line between Permian and Pennsylvanian has not as yet been determined. Pennsylvanian and lower beds are of most importance here from the standpoint of source and reservoir rocks for oil and gas. Their thicknesses can be measured in detail on the banks of the White River plateau near Glenwood Springs where they are well exposed for study. Pennsylvanian beds of the same age as the Paradox formation of southwestern Colorado do not contain massive beds of salt here, nor are its gypsum beds as massive as they are to the southwest. These beds can be studied at their outcrop, while those of the Paradox Basin are not exposed anywhere. The Pennsylvanian series is tentatively separated into three divisions, upper, middle and lower, on lithologic evidence. The upper, red member consists of 550 feet of arkosic sandstones, grits, micaceous shales with sparsely interbedded olive drab colored, fine-



...ge in the middle distance. To right, in middle distance, is val... ...en in distance at extreme right, while Red Table mountain ...avel terrace of quaternary age

grained limestones; the middle member, approximately 600 feet thick, has been called the gypsiferous member due to the presence of several massive, lenticular beds of gypsum and anhydrite in a series of gray to dark shale, limestone and occasional sandstone beds. Of interest is a 2-foot coal seam near the middle of this section. The lower member of the Pennsylvanian, approximately 700 feet thick, consists of dark shales, limestones, sandy limestone and sandstone near the base.

The underlying massive Madison (Leadville) limestone, approximately 250 feet thick, of Mississippian age, is separated from the Pennsylvanian by an erosional unconformity; it is followed downward by an unconformity and 130 feet of Devonian beds, sandy at the base, which in turn rest unconformably on 140 feet of Ordovician dolomitic limestones. Underlying the Ordovician beds unconformably, the Cambrian is represented by the Peerless shale member approximately 87 feet thick and the Wasatch quartzite member measuring 256 feet. This latter member of the Cambrian rests unconformably on the Pre-Cambrian basement complex.

Similar to the Paradox Basin of southwestern Colorado and southeastern Utah, the Glenwood Springs Basin is traversed by several northwest-southeast trending, regional lines of folding on which a number of local anticlines are developed. To the southeast these folds merge into faults showing considerable displacement. The main structural feature of the Elk Mountains in the southern part of Glenwood Springs Basin is a large thrust fault which can be traced for miles. While the lines of uplift are suggested on the geologic map of the state of Colorado, considerable study was required to trace them across the Glenwood Springs Basin, much of the surface of which is covered by basalt flows. The major lines of folding and principal local anticlines developed thereon in the southwestern part of the Glenwood Springs Basin are shown on Figure 2. The anticlines in order of their importance are: The Roaring Fork anticline, Cattle Creek anticline and Snowmass anticline. The folding seems to have been influenced somewhat by the Elk Mountains to the south and the White River plateau to the north so that local anticlines have en echelon tendencies. Another local anticline is situated to the east of Cattle Creek anticline, on the same regional axis as the latter. Other lines of folding in the Glenwood Springs Basin outside of the area of Figure 2 are found near Ruedi; in the vicinity of Gypsum and Eagle; near Buford north of the White River plateau, as well as to the northwest of Mount Sopris. Further study of other parts of the basin will probably reveal other anticlines favorable for oil and gas accumulations.

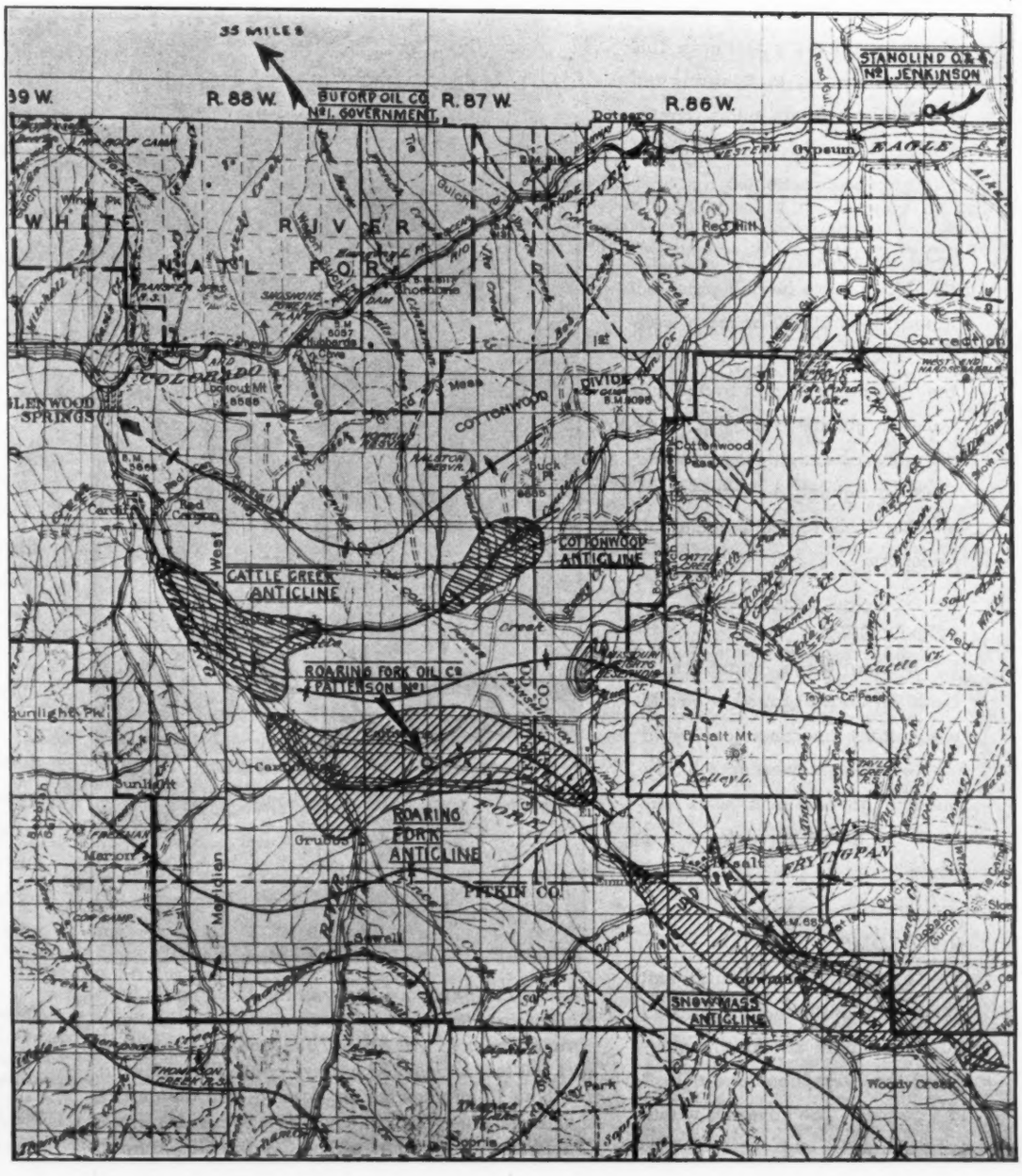


Fig. 2—Western part of Glenwood Springs Basin, showing anticlinal and synclinal axes, anticlines of the region and three test wells drilling. (After U. S. Forest Service map of Holy Cross National Forest. Geological features by H. W. C. Prommel, consulting geologist, Denver, Colo.)

Oil Source and Reservoir Rocks

Anticlines in the Glenwood Springs Basin are underlain by a series of formations already described above which show an unusual number of oil source and reservoir rock horizons. The black shales of the "Parting Quartzite" of the Devonian and those of the Lower Pennsylvanian section, as well as the many fossiliferous limestones throughout the section, from the Lower Pennsylvanian downward to and including the Ordovician, offer numerous source beds throughout the section. Sandstones in the basal Pennsylvanian and in the parting quartzite of the Devonian represent possible reservoir rocks. Besides these, oil has often been found along lines of unconformities such as are present at the top of the Madison, the top of the Devonian, the top of the Ordovician, and at the top of the Cambrian. A nodular limestone horizon in the section of the Lower Pennsylvanian beds exposed to the west of Glenwood Springs, along the state highway leading from Glenwood Springs to Grand Junction, about a mile west of the city of Glenwood Springs, may represent a slight unconformity in the Pennsylvanian beds; it shows dry petroliferous residue. Oil in commercial quantities has not as yet been found in the Cambrian.

Apart from the sandstones and unconformities mentioned, the Mississippian beds are very porous and show large solution cavities along their outcrops in Glenwood Canyon. This is especially true of the top of the Mississippian. In some of these cavities above Glenwood Springs dry petroliferous residue in the shape of lumps have been found and attempts were at one time made to market them as gilsonite. A complete test of all possible horizons should be carried through the Peerless shale into the underlying Wasatch quartzite.

Leasing and Drilling Activities

It has been known for several years that structural conditions to the south of Glenwood Springs were somewhat similar to those of southwestern Colorado but no detailed studies were made until

(Continued on Page 24)

SPARKS FROM THE NEWS

PROTEST AT POLLS

Missouri voters are not going to submit to the 1-cent increase in gasoline tax voted by the last legislature. Over 160,000 have signed a referendum petition, assuring opportunity to vote against the increase at the next election.

BETTER PRICES

An observer points out if the motorist is willing to pay more for a new car next year he should not object to higher prices for the fuel and oil to run it.

EMBARRASSED

Claiming oil reserves in excess of any other country the Soviet is finding it impossible to keep production up to the mounting domestic demands. This is embarrassing to Russians but many oil producers in this country would like to be faced with that same embarrassment.

TO THE FORE

Motor fuels having army octane ratings of 100 or more were curiosities five years ago and now they are being bought by the millions of gallons annually. They are quickly becoming the standard fuels for fighting aircraft and for starting fuels for commercial air transports.

TOO COSTLY

Storing large quantities of crude oil above ground is considered highly uneconomical by almost every agency except military-minded governments who earmark the tanks "for defense purposes."

HOW COME?

Governor Huxman finds that 27 per cent of the motor fuel used in Kansas paid no tax. In other states the exemption runs only 3 to 4 per cent. The governor wants to be shown.

BOOM IS ON

The necessity of driving to the next town to obtain hotel accommodations has brought the Illinois oil boom forcefully to the attention of many observers.

SPARTA MAY SPREAD

Finding a thick saturated section of the Sparta formation of the Claiborne series of Eocene age in Evangeline Parish, southern Louisiana, indicates possibilities in this formation not only in Louisiana but in Texas and Mississippi.

S.O.S.

Business is entitled to have its rules of conduct defined in a clear and understandable manner, E. G. Draper, assistant secretary of commerce, told the National Petroleum Association, adding that many are hopelessly at sea as to what they are or are not permitted to do.

WILD GASSER IN EL SEGUNDO

George F. Getty No. 1 Getty in the El Segundo field, California, blew out while drill pipe was being withdrawn. The hole was about 7,100 feet, but a gas sand at 1,400 feet is believed to have caused the blowout. In about 10 minutes the gas ignited, and the derrick melted. The fire went out when flow by heads started. (Photo by T. P. Sanders of The Oil and Gas Journal)

LIKE SHOWS

The enthusiasm being shown in advance of the Houston Oil-World Exposition shows that people like shows.

IT MIGHT

There are still some who think that if East Texas insists on exhausting itself the rest of the industry "should worry."

ONLY NATURAL

The petroleum product most difficult to buy in quantities at the quoted market prices is natural gasoline. But this seems only normal at this season of the year when refiners are preparing to make winter motor fuels.

WORTH THINKING ABOUT

The I.P.A.A. subcommittee on unnecessary drilling suggests that per well income is just as important as per well allowable.

Future Business Regulation Is Main Topic Before N. P. A.

By HENRY D. RALPH

ATLANTIC CITY, N. J., Sept. 18.—Forecasts of further attempts to regulate business by government and predictions that pressure groups may mold such attempts into extreme forms unless forestalled by intelligent cooperation of business men ran through the entire program of the thirty-fifth annual meeting of the National Petroleum Association.

This note of warning was sounded by practically every speaker, but each paid tribute, to the value of trade association activity. This was particularly true of the addresses by E. G. Draper, assistant secretary of commerce, by Donald R. Richberg, formerly counsel and later head of the National Recovery Administration, and by Edwin B. George, economist of Dun and Bradstreet and formerly merchandising expert of the department of commerce.

Approximately 250 oil men attended. All officers of the association were reelected.

The convention was opened by the president, Charles L. Suhr of the Pennzoil Co., who reviewed the activities of the association during the past 35 years, declaring "the association has proven its ability to keep pace with and adapt itself to changes in the industry. There is no deadwood in its structure, and its form is admirably suited to elasticity and growth." Urging members to take a more active part in the more or less routine work of association, Mr. Suhr described the recent accomplishments of the departments of economics, accounting and statistics; legislation and litigation; manufacture; standards and tests; traffic and transportation; fire prevention and safety; and taxation.

A feature of the opening session was a symposium on "Thirty-five Years of Cooperation," participated in by officials of three other oil associations—W. R. Boyd, Jr., executive vice president of the American Petroleum Institute; J. E. Moorhead, executive secretary of the Pennsylvania Grade Crude Oil Association; and H. T. Ashton, executive vice president of the Western Petroleum Refiners Association.

Richberg's Warning

The address by Mr. Richberg on "Prospects of Future Regulation of Business" readily admitted the defects and difficulties of NRA, but warned the same forces which caused the break-down of that experiment are still at work and will continue to influence all attempts of the government to control business.

Mr. Richberg declined to make any specific predictions regarding new legislation, but left the impression forces now at work in this country may bring about so much piece-meal and misguided business reform the economic structure may suffer. The only solution he suggested is for management to head off such legislative efforts by cooperating with labor and consumers in developing a program which will bring about increased consumption at the lowest prices consistent with fair wages and a fair return on investments. And he added the oil industry is in a better position than many others in this respect.

"If government regulation of business in the future is to follow the pattern of the past fifty years," he said, "we have the unhappy prospect of steadily increasing the responsibilities of both government and business, while steadily diminishing their power to fulfill them. That is the road to economic collapse and political upheaval. I am

Underwood & Underwood

DONALD R. RICHBERG

convinced that unless we can get more business intelligence into political policies and more political intelligence into business policies we are on the way to a struggle for power that will cost the American people more than any war or depression in our history.

"We know that labor will continue to seek better wages and working conditions and to assert more and more influence in shaping business policies. We know that as consumers all of us will continue our efforts to buy more things for less money. We know that democratic government will be responsive to mass demands and will continue experiments in aid of labor and consumers. It will adopt inconsistent and often self-defeating policies, because all of us as consumers want lower prices and plenty of competition, while as producers we want higher prices and very little competition. In this situation whenever business as a whole unites in opposition to any strong movement to regulate business it opens the way for one-sided injurious regulation. Antitrust laws, taxation and labor regulation, for example, have been written to impose terms on a defeated opposition.

"When people generally become convinced that men in power are using their brains solely for selfish gain the obvious popular program is to transfer as much as possible of existing power into the hands of those who are sufficiently adventurous or ignorant of practical difficulties to attempt miracles of reform.

"Thus the sincere, informed progressive, the zealous youth and the callous demagogue are joined together; while the humane but hard-headed executive finds his talents useful mostly in the service of reactionary self-interest; and the resources of the nation are wasted in a futile struggle to decide which wrong-headed faction shall lead us astray.

"Whenever the representative men of management induce adequate representatives of the workers and customers of your industry to join in working out a program to promote the largest possible production and consumption of its products at the lowest possible prices consistent with a fair return to investors and desirable wages for labor, then intelligent regulation of this industry by a cooperation of private management and government will become possible and indeed probable. But just so long as managers, consumers and labor are separately seeking to make government a partisan instrument for the special advantage of each pressure group, the improvement of this industry by public regulation is likely to follow the course of surgical relief under which the surgeons successfully remove one diseased organ after another until finally the much relieved patient dies.

'The present health of this (the petroleum) industry is such that you may be assured that several other industries will precede you along the road of surgical relief, thus allowing considerable time for experimentation with internal medicine—which may be otherwise described as constitutional treatment."

Fahy on N.L.R. Board

Contrary predictions regarding the national labor relations act were made by government officials speaking at the Thursday session. Charles Fahy, counsel of the National Labor Relations Board, and formerly with the old Petroleum Administrative Board, predicted the act and its administration are so just and fair they will endure unimpaired and criticism will be silenced, while Ernest G. Draper, assistant secretary of commerce, speaking personally and not as a government official, predicted that sooner or later we must improve the machinery that supervises the handling of industrial disputes.

Mr. Fahy drew a parallel between "hot" oil and labor relations, declaring that when the "hot" oil section of the NRA law was invalidated by the courts congress enacted the separate Connally act, and that when section 7-A of the NRA fell congress enacted the separate labor relations act, which he asserted would prove as effective in solving the labor problems as the Connally act was in stopping illegal shipments of petroleum.

Mr. Fahy declared:

"All in all there is a very great amount of compliance with the law. Even before the act collec-

tive bargaining and complete freedom in self-organization was the accepted status in a number of industries. Now that the law requires these conditions to prevail, the number of those who are reaping the benefits of peace with their employers on the sound basis of ethical and just standards is daily augmented. This is true notwithstanding the act has operated during a period of rising industrial activity, always accompanied by disputes between employer and employe, and during the most unusual period of organizational activity ever experienced in this country, accompanied by a major war between large labor organizations themselves. The combination of these circumstances has presented difficult problems; but the principles of the act are so unassailable, both on legal grounds and on moral grounds, that it furnishes the permanent guide for industrial peace, and will win through to that end after the temporary difficulties of the day are solved."

Need Clear Rules

Mr. Draper in his address declared:

"Business is entitled to have its rules of conduct defined in a clear and understandable manner. Under present conditions, many of those who are making a sincere attempt to comply with these rules are hopelessly at sea over what they are and are not permitted to do. Our antitrust laws in particular have become more and more muddled as a result of judicial interpretation so that now you can quote a judicial decision for almost any act of business conduct in the antitrust field. As a part of its service to industry, government should redraft these laws so they will be both intelligible and fair to the average business concern."

"The Recent Congress and the Coming Session" was discussed in a paper prepared by Julian D. Conover, secretary of the American Mining Congress.

Legislated Merchandising

The effects of new laws on selling practices were discussed by Edwin B. George of Dun and Bradstreet in his paper on "Legislated Merchandising."

Discussing chain store taxes, Mr. George said their defect is that they strike at the marketing structure instead of marketing abuses and may cause even more ruthless competition than that at which they were aimed. He predicted the recent Louisiana chain store tax decision by the Supreme Court may bring a new wave of oppressive taxation.

The Federal Trade Commission decisions under the Robinson-Patman act still have business guessing, but they suggest the commission is not being stiffly academic but is applying the law with realism and flexibility. The commission is determined to stretch its powers over interstate commerce to the breaking point to maintain jurisdiction over trade practices, but it has leaned backward in not shifting the burden of proof to the accused and has taken a reasonable attitude toward differences in cost of distribution and affects on competition as justifying quantity discounts.

Because of differences in many of the 42 state price maintenance laws made effective by the Tydings-Miller act, the speaker warned business men to study these laws carefully before acting under them. He did not think price maintenance laws would raise the general levels of retail prices much in the long run because of competition between national manufacturers and competition from private brands and unbranded merchandise, and because there may always be enough chiselers to offset extreme attempts to raise prices, and because the government now has the duty of taking action against conspiracies of manufacturers and distributors to raise prices.

"The new powers of organized retailers are as important as the new laws. They are being effectively arrayed against the different powers of mass distributors."

Safety Rules

The proposed I. C. C. safely rules for tank trucks were discussed at a group conference on traffic and transportation by J. F. Winchester of New Jersey. He pointed out that if the I. C. C. makes its regulations regarding tank trucks too restrictive, even though applied only to common and contract carriers in interstate commerce, it will have a widespread adverse effect on the oil industry because states are apt to adopt these regulations for all shipments.

Features at the annual fellowship banquet, of which R. G. Sonneborn was chairman, were the presentation of a silver service to Herbert G. Eaton in recognition of his 35 years as secretary and of a gold dinner plate service to Mr. and Mrs. Otto Koch of Kendall Refining Co., who recently celebrated their golden wedding anniversary.

E. G. Richardson of Shell Union Oil Corp. was elected to the board of trustees, succeeding W. P. Durkee, Jr., of the same company.

W. H. Carson Named Dean

Having gained recognition as an authority in petroleum engineering practices W. H. Carson was honored in the past week by being named dean of

DEAN W. H. CARSON

the school of engineering at the University of Oklahoma at Norman Okla. Dean Carson has been in the engineering department of the university for 12 years and has supervised a large number of research projects. The findings of his committee on steam power for rotary drilling has been generally adopted as standard by the petroleum industry. Another project of which he is chief director is that on fluid meters research which is now going on. It was started in 1929, and will run for two more years. He also directed the research on electric power for rotary drilling and assisted in many other worthwhile projects of importance to petroleum.

Under his supervision the school of engineering has assembled a complete drilling rig and a complete refinery.

In assuming the duties as dean Mr. Carson is carrying on the work left by Dr. J. H. Felgar several months ago when the latter resigned.

WEST CENTRAL COLORADO

(Continued from Page 21)

1936 when H. W. C. Prommel and V. J. Hendrickson, petroleum geologists of Denver, Colo., studied stratigraphic and structural conditions in considerable detail for Roy H. Johnston of Hollywood, Calif., and Joe T. Juhan of Glenwood Springs, Colo., who formed the Roaring Fork Oil Co. This company quietly proceeded to lease large areas on the principal anticlines of this region.

The Stanolind Oil & Gas Co. of Tulsa, successors to the Midwest Refining Co. of Denver, Colo., for a number of years has held a block of leases in the vicinity of Gypsum and Eagle. The Buford Oil Co. has leased up considerable ground near Buford, to the north of the White River plateau.

Drilling is now being carried on at three widely separated places in the Glenwood Springs Basin. The Roaring Fork Oil Co. is drilling the No. 1 Patterson on Roaring Fork anticline in the C NE section 36-7s-88w. The present depth of the well is 500 feet and the well is drilling in black carbonaceous shale of Pennsylvanian age. Stanolind Oil & Gas Co. in its No. 1 Jenkinson well in the NW SW SW section 34-4s-85w, between Gypsum and Eagle, is drilling at 700 feet. Both No. 1 Patterson and No. 1 Jenkinson start in the gypsiferous member of the Pennsylvanian series. Buford Oil Co. on the Yellow Jacket structure has just cemented 12½-inch casing at 116 feet in its No. 1 Government in the C SW SW section 16-1n-91w, to the north of the White River plateau. This well which starts in Upper Pennsylvanian beds will throw some light on the northwest extension of the Glenwood Springs Basin.

The three test wells mentioned are strategically well located in that each of them is exploring a different part of the Glenwood Springs Basin. The Roaring Fork Oil Co.'s well is on the western margin of the basin. The Buford Oil Co.'s well is drilling near the northwest end of the basin while the Stanolind Oil & Gas Co.'s well is near the center of the basin. These wells will, therefore, be watched with interest as they are testing a geosynclinal basin traversed by regional lines of folding with favorable stratigraphic sections; they contain many beds which have produced oil and gas in commercial quantities in the Rocky Mountain, and in the Mid-Continent provinces.

Prospective localities in the Glenwood Springs Basin are easily accessible by railroad, as well as by a number of fine state and federal automobile highways. Water is abundant at most places and the region is well settled so that there are no obstacles to speedy development should this large potential area develop producing oil and gas fields.

Mixed Gas Suit

COLUMBUS, Ohio.—A suit filed in common pleas court here charges Columbia Gas & Electric Corp., six affiliated corporations and 14 officials with mixing unburnable gases with natural gas sold to 700,000 Ohio consumers over a nine-year period. The complaint was filed by John L. Davies, Columbus city attorney, as a consumer.

Each consumer, it was alleged, was paying about 10 per cent above the legal rate—about 1,100 feet of the mixed gas being required to do do the work of 1,000 feet of natural gas. The suit was filed under a treble penalty statute.

Barnsdall Contracts Output

The Barnsdall Refining Corp. expects construction to be completed by November 1 on its new 3,000-bbl. refinery at Corpus Christi, Tex., and has contracted for the sale of all gasoline produced at this plant up to January 1, 1939, to an English marketing company for delivery abroad.

Illinois Outlook Widening

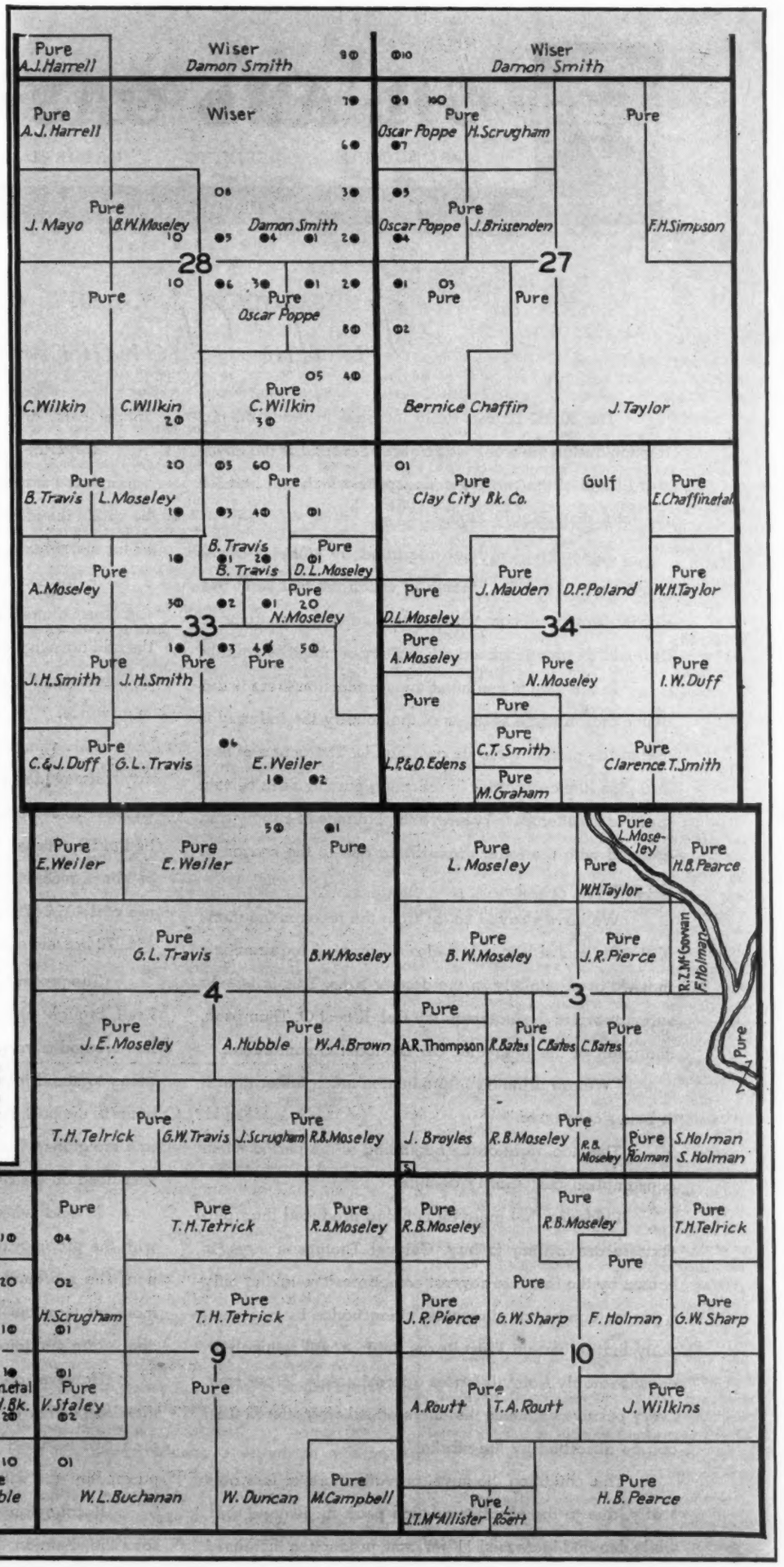
By DORSEY HAGER

The contrast between the new methods of oil field development and the old is strikingly brought out in Illinois. The Casey and Robinson oil areas, with their standard tool equipment, old types of power, with shackle rods and pumping jacks, are in marked contrast to the new Cisne, Clay City and Noble oil fields in the Illinois Basin. In the latter area the most modern rotary equipment is used in drilling; steel derricks instead of portable cable tool outfits. Oklahoma, Texas, and Kansas drillers are on the job—men foreign to the early Illinois development. Wells are drilled nearly 3,000 feet deep in 10 days. When completed the wells are tubed and allowed to flow under modern methods.

Drilling technique is, however, only one phase of this interesting development. More important is the part which technical guidance is playing in the locating of the oil fields. The seismograph is considered the all-important feature in outlining the places to drill. To date four new fields claim seismography as their father. While some credit can justly be claimed for subsurface geological information as a starting point in three instances, the fourth—the Ohio well at Noble—was a pure reflection shooting success.

How successful the seismograph will prove in other areas remains to be seen. Already numerous conflicts in shooting results have arisen; three

(Continued on Page 36)



The Clay City pool in Townships 3n-8e and 2n-8e, Clay County, Illinois, the most important area opened this year in that state. It was recently extended about 1 3-4 miles southwesterly by the well spotted in Section 8-2n-8e, drilled by Gordon Oil Co., Robinson and Duncan. The map was made from a base map of Mid-Continent Map Co., Mattoon, Ill.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

In the Danger Zone

The 50,000 barrels daily increase in crude oil production during the week was a sharp reversal of the downward trend of the two previous weeks which still had left the total disturbingly high.

September has been regarded by students of the situation as the critical month in which the course of production would indicate whether the industry was going to trim sail or plunge ahead regardless of possible squalls.

In the face of continued overproduction there is evidence that in some sections of the country the industry is taking the problem into its own hands. The action of several pipe line companies in prorating purchases in certain areas is an attempt to preserve the balance of supply and demand with the latter diminishing due to the season of the year.

We have strayed so far from the recommendations of the Bureau of Mines based on estimated requirements that we are definitely in the danger zone. This is tersely summarized in the statement by Col. Ernest O. Thompson, chairman of the Interstate Oil Compact Commission:

"We are bringing in production much faster than it is being consumed."

This, too, right at the beginning of the period when consumption customarily declines.

Evidence that more oil is being produced than purchasers are willing to buy, Colonel Thompson says, is shown by the fact that several companies are taking only a percentage of the allowable, citing notice by one company that in certain West Texas fields it will reduce purchases ratably from all leases approximately 36 per cent, "very positive evidence that more oil is being offered than can be absorbed by the market."

This condition, he says, prevails more or less generally, due to the summer all-time peak in demand, but, while demand increased 11 per cent, production increased 15 per cent, an excess that is still less excusable now.

Nevertheless a ray of hope was revealed in Colonel Thompson's statement to the effect that Texas, in order to be within the market demand, should reduce its allowable in the neighborhood of 100,000 barrels daily in October.

A further encouragement was the fact that in this estimate Colonel Thompson had commendably recognized the additions to production which are made by completions in Texas after the first of the month, thus allowing for them in advance.

This was followed by the order issued after Monday's statewide hearing reducing the state allowable for October 93,540 barrels under the state allowable production of September 18, and 24,456 barrels under the Bureau of Mines recommendation for the coming month. The figure of 1,405,844 compares with the state allowable of 1,454,070 barrels early in September, or 48,226 barrels less.

The present predicament in which the industry finds itself, brought about by the old evil of excess production, has created a very delicate situation. The industry is not going to stand idle and drown in its own oil as so many times in the past. It has learned much in the past few years and the gains which have been made are not going to be sacrificed on the altar of selfishness.

If, and when, the regulatory bodies fail to cope with the problem there will be a tendency to self-regulation. The proration by purchasers when they are offered more oil than the market can absorb is convincing evidence of a condition that cannot be disregarded.

However opinions may differ between states as to their respective apportionments, if more oil is produced than can be used or stored profitably that fact will be paramount and will have to be met in one way or another.

Recognition of this, even at this late day, may yet save the situation.

Soviet Reserves No Immediate Threat to World Oil Markets

By WILLIAM J. KEMNITZER

The petroleum industry of the U.S.S.R. is probably the most vital of the heavy industries in that country. It may be said that both the industrial life and the national welfare depend on the ability of the Soviet petroleum industry to satisfy the rapidly expanding requirements of Soviet planned economy. Much has been said of the petroleum potentialities of the U.S.S.R., but little has been learned of its ability to produce. Today those potentialities are known to be great, but production is lagging dangerously behind domestic demand, and this fact is as alarming to the Soviets as it is surprising to the rest of the world.

At the recent meeting of the seventeenth International Geological Congress in Moscow, Academicien I. M. Gubkin, the leading Soviet geologist, stated that the petroleum reserves of the U.S.S.R. are estimated to be 3,877,000,000 tons (more than 27,000,000,000 bbls.) This figure compares with 1,765,000,000 tons (less than 13,000,000,000 bbls.) for the United States, holder of the second largest reserves. Some criticism of Gubkin's comparisons was made by American geologists at the congress, the main objection being that anticipated discoveries were not included in the estimate for the United States. Regardless of the objections, concensus was that the U.S.S.R. holds reserves of petroleum as large if not larger than those of any other country in the world.

This primary position of the U.S.S.R. with regard to petroleum reserves is believed by many to make that country a threat to world markets. An analysis of the ability of the Soviet Union to produce petroleum in quantities beyond its own demand, however, should dispel any apprehension in this direction at least for some years to come. As a matter of fact, the demand for petroleum within Soviet territory has increased and is increasing at such a rate that it is difficult for the country to produce sufficient quantities with which to satisfy its own requirements, not to count on export surpluses. This critical situation is borne out by a comparative analysis of supply and demand; by the apprehension among directors of Soviet industry for a sustained supply of motor fuels; and the measures being taken to economize in the use of petroleum on the one hand against the effort to increase the amount and efficiency of production on the other.

During the decade following the revolution in October, 1917, the demand for petroleum in the U.S.S.R. was small. The country was neither motorized nor industrialized. The first economic plan beginning in 1927-28 was mainly one of development of agriculture and the light industries. Relatively at that time, petroleum was plentiful. Repair of the old wells, pipe lines, tankcars, refineries and other equipment to a degree commensurate with the demand for petroleum was comparatively a simple task. Under these conditions a surplus of petroleum developed.

The country needed credit to help finance its economic program. Apparently as part of the plan to obtain credit, crude oil and refined products for which there was little use at home at the time, were sent into the world markets. It was this export expansion of the Soviet petroleum industry which led to the widespread but erroneous belief that the Soviets could produce unlimited amounts of petroleum, and which gave so much concern to international marketers of petroleum from other countries.

TABLE 1—COMPARISON OF SELECTED ITEMS OF THE PRODUCTION AND REFINING BRANCHES OF THE PETROLEUM INDUSTRY IN THE U.S.S.R., CALIFORNIA, AND THE UNITED STATES

Item—	U.S.S.R.	California	U. S.
Production branch:*			
Crude prod., bbls. daily	537,680	619,172	3,420,232
No. producing wells	8,000	12,850	345,478
Av. daily prod. per well, bbls.	67 2	48 2	9 9
Refining branch:†			
Runs to stills, bbls. daily	415,068	487,271	2,732,329
Gasoline prod., bbls. dly.	73,370	189,921	1,253,700
Av. recovery, per cent	17 7	39 0	45 8

*Data for first six months of 1937.
†Data for year 1935.

About the beginning of the second Five-Year Plan in 1932, however, a change in policy of the Soviet planners took place. Instead of emphasis on agriculture and the light industries, the new plan provided for concentration on heavy industries and national defense. Such a program meant the rapid mechanization of a country nearly three times larger than the United States in area and with a population of more than 165,000,000 people. The role of motor fuel for internal combustion engines, of liquid fuels for railroad and industrial purposes, of oils and semi-solid petroleum products for roads and the like in such a plan is obvious.

Almost overnight the Soviet nation found that its position with regard to petroleum must be reversed. Before long, thousands of automobiles, trucks, tractors, aeroplanes, ships, factories, locomotives, cars, roads and other items demanding petroleum were being produced, and taxing the Soviet petroleum industry to the limit. Soon it was clear to the directors of Soviet economy that the petroleum industry must be expanded, that the domestic use of petroleum must be economized, and that exports must be curtailed.

That this predicament is now paramount in the minds of those charged with the destiny of Soviet economy is evinced in the statements and decrees of the Central Executive Committee and the Council of People's Commissars who say[1]: "Of great importance is the strengthening of the defensive power of the Soviet Union. . . . The annual plan of heavy industry was exceeded by 5.4 per cent" . . . but "in spite of the important successes . . . a number of serious defects in the development of the national economy . . ." have occurred. "First among these defects is the fact that the technical reconstruction of a number of branches of the national economy is lagging. . . . The fact cannot be overlooked that while the production program of industry as a whole was overfulfilled, such branches as the . . . oil industries . . . fell considerably short of their plans." Accordingly, "All economic organizations are obliged in 1937 to *reduce the standards of consumption of oil fuel by not less than 12 per cent. . .*" [*sic*]. At the same time the committee and council decreed to set the production of crude oil at 32,200,000 tons; to fulfill a drilling program of 2,880,000 meters; to put into operation 2,100 new wells and 1,500 small-capacity renovated wells; to put into operation eight new cracking plants; and to carry out an extensive plan for building oil reservoirs—the heaviest program for any single year in the history of Soviet petroleum.

In the scheme of things which began in 1932 with the second Five-Year Plan, the Soviet planners apparently had thought that a simple increase in refining capacity and efficiency would assure an abundant supply of motor fuel. Plainly, the ability of the production branch of the industry to furnish the extended refinery capacity with crude oil was taken for granted. This credence is evident on comparing the enlargements in refining with the unsatisfactory results of drilling and production. In short, by virtue of this misconception, the Soviet petroleum industry finds itself in the position of having overexpanded refining and underdeveloped production. At the same time, the refinery output, notwithstanding its increase, is lagging far behind the increased output of automotive and other units consuming petroleum. Thus produc-

[1]The national economic plan of the U.S.S.R. for 1937; decree of the Central Executive Committee and the Council of People's Commissars of the U.S.S.R.; Cooperative Publishing Society of Foreign Workers in the U.S.S.R., 32 pages, Moscow, 1937.

Soviet Petroleum Today

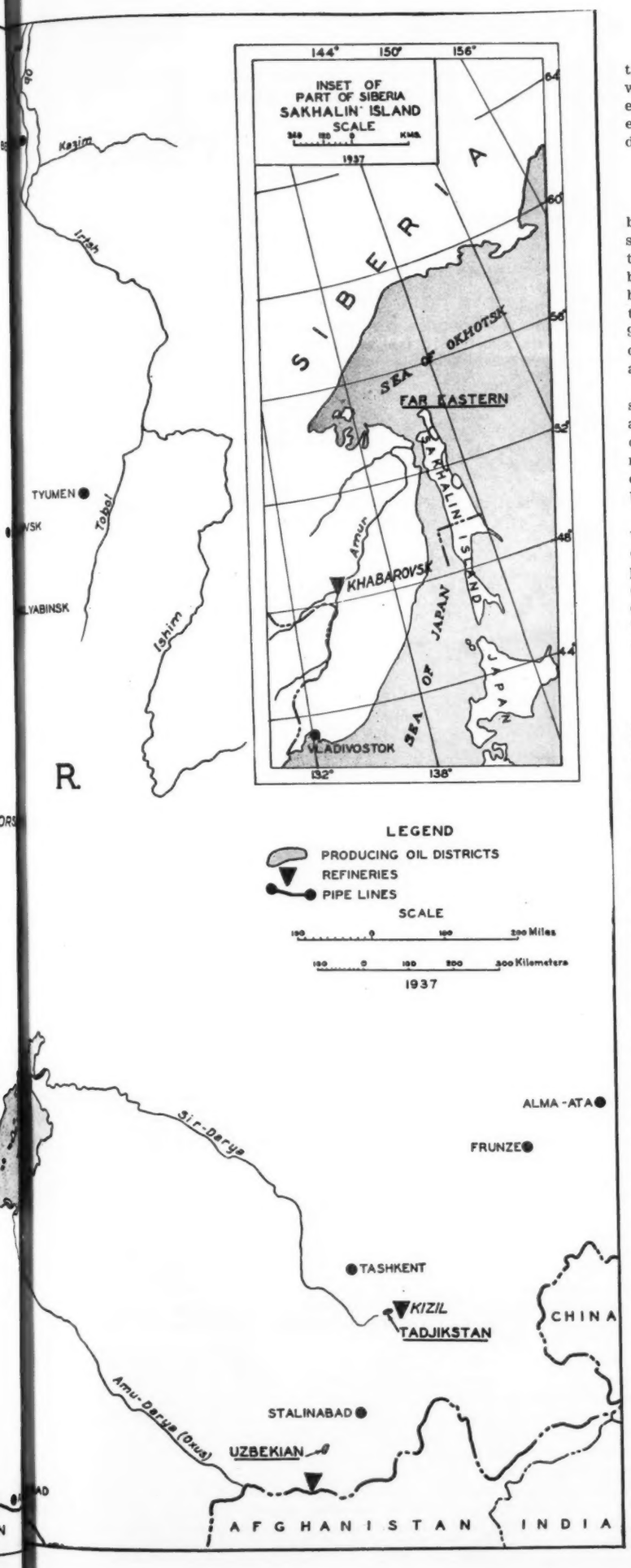
This article is the first of a series by William J. Kemnitzer describing the present status and outlook for future oil development in the Union of Soviet Socialist Republics.

Mr. Kemnitzer, a widely known geologist and engineer, attended the International Geological Congress in Moscow in July and has since been engaged in the preparation of the articles which will appear exclusively in The Oil and Gas Journal.

In this series Mr. Kemnitzer gives the reader the background of Russian oil operations over a period of several years emphasizing their relationship to the economic development of the country and its position in world trade.

The petroleum industry everywhere will be interested in this first-hand analysis of the second largest oil-producing area with reserves which are believed to exceed those of any other country.

SWEDEN
FINLAND
BALTIC SEA
GULF of FINLAND
ESTONIA
LATVIA
LITHUANIA
EAST PRUSSIA
POLAND
WHITE SEA
ARCHANGEL
Pechora
North Dvina
NORTHERN
Lake Ladoga
PETROZAVODSK
Lake Onega
LENINGRAD
MINSK
SMOLENSK
IVANOVO
Volga
Klyazma
MOSCOW
GORKI
KIROV
SVERDLOVSK
PERM
Vyatka
Kama
KAZAN
SARANSK
UFA
SAMARA
BASHKIR
KURSK
VORONEZH
KIEV
VINNITSA
U. S. S.
SARATOV
Dnepr
KHARKOV
DNEPROPETROVSK
TRUDOVAYA
MILLEROVO
Don
Volga
STALINGRAD
ROMANIA
ODESSA
KHERSON
BERDYANSK
ROSTOV-ON-DON
KAZAKHSTAN
SEA of AZOV
SIMFEROPOL
KRASNODAR
ASTRAKHAN
CHAPAEV
BULGARIA
AZOV-BLACK SEA
ARMAVIR
TUAPSE
NORTHERN
GROZNY
MAKHACH-KALA
CASPIAN SEA
CAUCASUS
GEORGIAN
BATUM
TURKEY
ERIVAN
BAKU
GULF of KARABUGAZ
AZERBAIDJAN
TURKMENIAN
Van Lake
MEDITERRANEAN SEA
SYRIA
IRAQ
Urmia Lake
IRAN
IRAN



tion is not keeping apace with refining and refining is not keeping apace with consumption. This is a situation which cannot continue without serious economic consequences. For this reason the most urgent problem of Soviet economic life today appears to be to balance operations in the petroleum industry and increase production at all costs.

Comparative Size of the Soviet Petroleum Industry

Before discussing the petroleum industry of the Soviet Union, it might be well to gain some idea of its comparative size. Its production branch is somewhat smaller than that of California. During the first six months of 1937, the production of crude petroleum in California amounted to 112,000,000 bbls., while in the U.S.S.R. the output amounted to approximately 97,000,000 bbls. The 112,000,000 bbls. in California came from 12,380 wells, indicating the average daily output per well to be 48.2 bbls. In the Soviet Union the 97,000,000 bbls. came from approximately 8,000 wells, indicating the average daily output per well to be 67.2 bbls. For the United States as a whole the average daily output per well is about 10 bbls.

The refining branch of the Soviet petroleum industry is less than half the size of that in California. During 1935, the output of gasoline in California amounted to 69,000,000 bbls. from 176,000,000 bbls. of crude run to stills, indicating an average recovery of nearly 39 per cent. In the same year, Soviet refineries recovered about 27,000,000 bbls. of gasoline from 152,000,000 bbls. of crude oil, indicating an average recovery of less than 18 per cent. For the United States as a whole gasoline recovery averages better than 45 per cent.

The petroleum industry of the Soviet Union is not large when compared with that of the United States. California produces about one-fifth of the crude oil and about one-eighth of the gasoline in the United States. Soviet production of crude oil is slightly less than that of California; and its output of gasoline is less than one-half that of California. Although the present size of the Soviet petroleum industry is something less than one-fifth that of the United States, it must be borne in mind that the petroleum potentialities of the U.S.S.R. are infinitely greater than those of the United States.

The Problem of Demand and Supply

The demand for petroleum at present in the Soviet Union, as in all modern mechanized countries, is mainly for motor fuels; all other refined products may be regarded essentially as by-products of gasoline manufacture. Thus gasoline in the Soviet Union, as elsewhere, is the foundation or basic product of the petroleum industry in that country, and an analysis of the demand and supply of this product in the U.S.S.R. will reveal the status of the Soviet petroleum industry.

The most common Soviet motor fuels are called benzine, ligroine and kerosene. Benzine is similar to gasoline. Ligroine is a heavier fuel used in tractors and to some extent in trucks. The bulk of the fuel used in tractors, however, is a still heavier fuel described as kerosene. The demand for these products, benzine, ligroine and kerosene, for all intents and purposes, constitutes the demand for crude petroleum, the supply of which must be sufficient at all times to satisfy both domestic requirements (including additions to stocks) and exports. An examination of the relationship between the demand for motor fuels and the supply of crude petroleum in the Soviet Union since nationalization of the petroleum industry in that country reveals that some striking changes have taken place.

Before the World War, the demand for benzine in Russia was negligible. The country was practically without automobiles and little industrialized. The demand for petroleum was mostly for kerosene for illuminating purposes, mazout (fuel oil) for heating boilers, and lubricants, while about half the output of crude petroleum was either used as such or exported. In 1913, from a production of 9,234,000 tons of crude oil, less than 6,000,000 tons were run to stills from which less than 200,000 tons of benzine were manufactured.

It was not until after inauguration of the first Five-Year Plan by the Soviets in 1928 that any noticeable growth and improvement in the petroleum industry took place, but still the bulk of the demand was for kerosene and fuel oil, and this in large part was for export. The program for the mechanization of farms and establishing automotive equipment had not yet got under way and the plan of concentrating on the heavy industries and national defense was secondary. In 1928, the production of automobiles and trucks numbered only 671; of tractors, 1,272; and the commercial aeroplane kilometers flown reached 1,726. This same year, 11,400,000 tons of crude was produced of which 8,900,000 tons was run to stills, yielding only 1,000,000 tons of benzine.

By the end of the first Five-Year Plan in 1932, the output of automobiles and trucks for the year reached 23,879; that of tractors 50,640, and for commercial aeroplane miles flown, 5,413. During the same year, 21,400,000 tons of crude oil was produced of which 20,200,000 tons was run to stills yielding less than 2,500,000 tons of benzine, 500,000 tons of ligroine and 3,900,000 tons of kerosene, much of which was used as tractor fuel.

During the entire period of the first Five-Year Plan, from 1928 to 1932 it is important to note that exports increased at an exceptionally rapid rate. By 1932 exports amounted to 6,100,000 tons, or about 35 per cent of the total production. The volume was indeed sufficient to cause some concern among international marketers, especially in light of the rate of increase. But no

sooner had their apprehension been voiced in meetings in New York and Paris to consider this "Russian threat" than a change in the Soviet petroleum situation began to take place.

Before the World War, the demand for benzine in Russia was negligible. The country was practically without automobiles and little industrialized. The demand for petroleum was mostly for kerosene for illuminating purposes, mazout (fuel oil) for heating boilers, and lubricants, while about half the output of crude petroleum was either used as such or exported. In 1913, from a production of 9,234,000 tons of crude oil, less than 6,000,000 tons were run to stills from which less than 200,000 tons of benzine were manufactured.

It was not until after inauguration of the first Five-Year Plan by the Soviets in 1928 that any noticeable growth and improvement in the petroleum industry took place, but still the bulk of the demand was for kerosene and fuel oil, and this in large part was for export. The program for the mechanization of farms and establishing automotive equipment had not yet got under way and the plan of concentrating on the heavy industries and national defense was secondary. In 1928, the production of automobiles and trucks numbered only 671; of tractors, 1,272; and the commercial aeroplane kilometers flown reached 1,726. This same year, 11,400,000 tons of crude were produced of which 8,900,000 tons were run to stills, yielding only 1,000,000 tons of benzine.

By the end of the first Five-Year Plan in 1932, the output of automobiles and trucks for the year reached 23,879; that of tractors 50,640, and for commercial aeroplane miles flown, 5,413. During the same year, 21,400,000 tons of crude oil were produced of which 20,200,000 tons were run to stills yielding less than 2,500,000 tons of benzine, 500,000 tons of ligroine and 3,900,000 tons of kerosene, much of which was used as tractor fuel.

During the entire period of the first Five-Year Plan, from 1928 to 1932 it is important to note that exports increased at an exceptionally rapid rate. By 1932 exports amounted to 6,100,000 tons, or about 35 per cent of the total production. The volume was indeed sufficient to cause some concern among international marketers, especially in light of the rate of increase. But no sooner had their apprehension been voiced in meetings in New York and Paris to consider this "Russian threat" than a change in the Soviet petroleum situation began to take place.

In 1933 the second Five-Year Plan was inaugurated. As has been stated previously, emphasis was laid on the heavy industries and the national defense, particularly on the motorization of transportation, increased mechanization of agriculture, the army, navy and air force. In 1935—unfortunately the figures for 1936 are not available at the time of writing—the production of automobiles and trucks was 96,220; of tractors, 113,566; and the commercial aeroplane kilometers flown, 26,721. The number of aeroplanes and other motorized equipment in the army and navy are not available but certainly are large. Nevertheless, production of crude oil in the same year reached only 25,100,000 tons, of which 21,600,000 tons were run to stills yielding 3,000,000 tons of benzine and ligroine and 4,900,000 tons of kerosene.

A comparison of the index numbers of petroleum production with those of "automotive" output, using the year 1928 as 100.0, shows that whereas the output of benzine increased to 407.7 in 1935, that of motor vehicles (automobiles and trucks) for the same year increased to 1,433.7; of tractors, to 892.8; and the commercial aeroplane miles flown to 1,548.1. At the same time the index number for the output of crude petroleum reached only 186.0.

Not only has the output of "automotive" units outstripped the production of petroleums, but at the same time domestic consumption of motor fuel has increased at a rate alarmingly greater than that of domestic production. In 1929, production of benzine (with ligroine) amounted to 1,263,000 tons compared with a domestic consumption of only 141,000 tons. By 1936, production had increased to 4,212,000 tons but domestic consumption had reached 3,788,000 tons. In other words, while production was increasing less than fourfold, domestic consumption increased 27-fold. In light of the fact that the excess of production over domestic consumption was largely exported and not added to stocks, marked significance is shown.

It is obvious that as early as 1935, the production of automotive units and other items of petroleum consumption, during the period of the second five-year plan were increasing at a much greater rate than the increase in production of crude petroleum and refined products. The quotas for 1937 show that these differences in rate of increase are continuing. According to these quotas, the production of crude petroleum during 1937 will have increased 39 per cent over the actual output of 1931; that of refined products 50 per cent; and the amount of drilling 293 per cent. As large as the proposed increases for the petroleum industry may seem, those for the principal consuming items of motor fuels are much larger. The production of automobiles and trucks, for example, is set for an increase of 878 per cent over that of 1931; and the production of tractors for a 404 per cent increase.

Here it is pertinent to note that the quotas set for the petroleum industry have repeatedly fallen short of the marks set while those for the products of other heavy industries exceeded their marks.

(To be continued)

TABLE 2.—PRODUCTION OF CRUDE PETROLEUM, RUNS TO STILLS, AND PRODUCTION OF REFINED PRODUCTS IN THE U.S.S.R., 1913, AND 1928 TO 1936, INCLUSIVE, BY YEARS

(In thousands of metric tons)

Year	Crude petroleum: Production	Crude petroleum: Runs to stills	Refined products: Benzine	Ligroine	Kerosene	Fuel oil	Lubricating oils	Other products*
1913	9,234	5,702	156	...	1,521	...	337	3,688
1928	11,472	8,882	752	130	1,912	4,096	331	1,667
1929	13,509	11,034	1,090	173	2,317	5,315	375	1,764
1930	18,451	16,173	1,654	306	3,231	7,611	487	2,884
1931	22,392	19,920	2,214	542	3,861	8,942	653	3,708
1932	21,413	20,215	2,459	422	3,560	8,470	680	4,624
1933	21,489	18,456	2,169	486	3,822	6,504	1,133	4,342
1934	24,218	20,300	2,310	463	4,462	8,519	1,372	3,174
1935	25,128	21,644	2,430	573	4,877	8,568	1,345	3,851
1936	27,340	25,000	3,005	1,207	5,410	9,350	1,500	4,528

*Includes losses.

TABLE 3—COMPARISON OF PETROLEUM PRODUCTION WITH AUTOMOTIVE OUTPUT IN THE U.S.S.R., 1928, AND 1932 TO 1936, INCLUSIVE

Year	Petroleum production: Crude petroleum	Petroleum production: Benzine plus ligroine	Petroleum production: Kerosene	Automotive output: Motor vehicles (units)	Automotive output: Tractors (units)	Automotive output: Commercial aeroplane kms. flown
1928	13,509	752	1,912	671	1,272	1,726
1932	21,413	2,881	3,560	23,879	50,640	5,413
1933	21,489	2,655	3,822	49,724	78,138	9,302
1934	24,218	2,773	4,462	72,472	94,452	17,864
1935	25,128	3,066	4,877	96,620	113,566	26,721
1936	27,340	4,212	5,410	.....	.....	.....

TABLE 4—INDEX NUMBERS OF PETROLEUM PRODUCTION AND AUTOMOTIVE OUTPUT IN THE U.S.S.R., 1928, AND 1932 TO 1936, INCLUSIVE

(Year 1928 = 100)

Year	Petroleum production: Crude petroleum	Petroleum production: Benzine plus ligroine	Petroleum production: Kerosene	Automotive output: Motor vehicles (units)	Automotive output: Tractors	Automotive output: Commercial aeroplane kms. flown
1928	100.0	100.0	100.0	100.0	100.0	100.0
1932	158.5	383.1	186.2	356.2	355.4	307.8
1933	159.0	353.1	199.8	741.0	614.2	539.0
1934	179.2	369.5	233.3	1,080.0	742.5	1,034.9
1935	186.0	407.7	255.0	1,433.7	892.8	1,548.1
1936	202.3	560.1	282.9	.....	.....	.....

TABLE 5.—COMPARISON OF DOMESTIC PRODUCTION WITH DOMESTIC CONSUMPTION OF BENZINE (WITH LIGROINE) IN THE U.S.S.R., 1929, AND 1932 TO 1936, INCLUSIVE

For index numbers year 1929 = 100.0

Year—	Domestic production: Tons	Domestic production: Index No.	Domestic consumption: Tons	Domestic consumption: Index No.
1929	1,263,000	100.0	141,000	100.0
1932	2,881,000	228.1	900,000	638.3
1933	2,655,000	210.2	1,091,000	773.7
1934	2,773,000	219.5	1,477,000	1,047.5
1935	3,066,000	242.8	2,576,000	1,826.9
1936	4,212,000	333.5	3,788,000	2,686.5

TABLE 6.—QUOTAS OF PRODUCTION FOR SELECTED SOVIET INDUSTRIES, YEARS 1931 AND 1937

Item of industry—	Year: 1931	Year: 1937	Per cent increase
Crude oil (tons)	23,100,000	32,160,000	39.2
Refined oil (tons)	19,900,000	30,000,000	50.8
Drilling (meters)	712,000	2,800,000	293.3
Tractors (hp.)	514,000	2,590,000	403.9
Automobiles (units)	22,500	220,000	877.8

(Sovfoto)

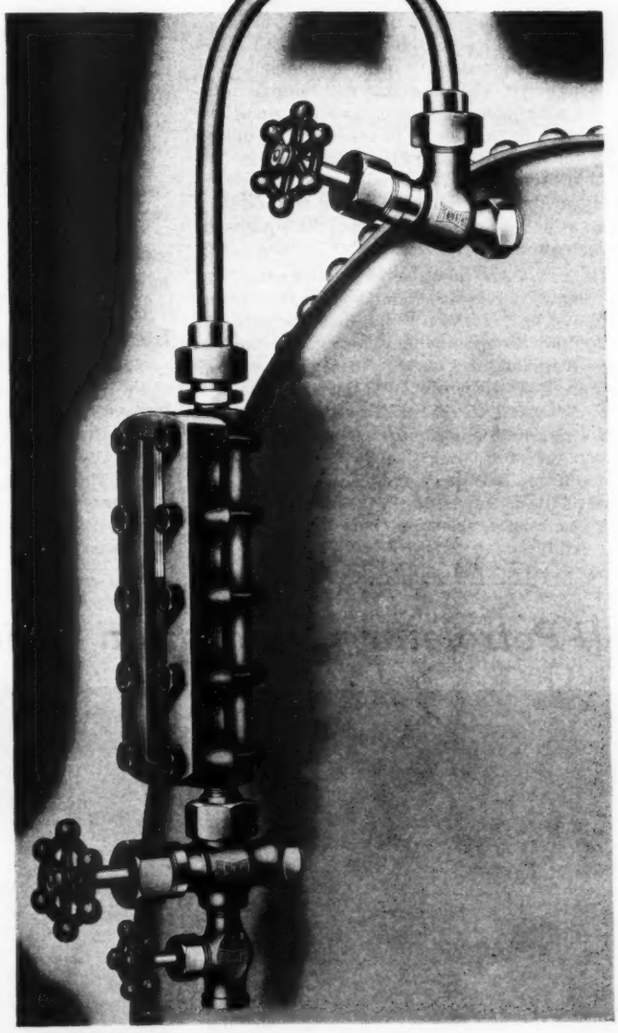
L. M. Kaganovich, new Commissar of Heavy Industry

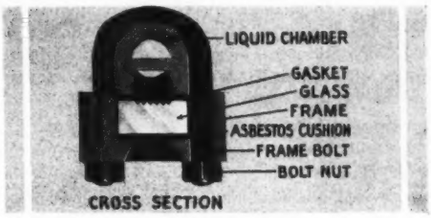
SIMPLICITY

the outstanding feature

of the **PENBERTHY REFLEX GAGE**

(Licensed under Jerguson Patent)





● "It is the most simple gage to service that I have ever seen." This statement is typical of the remarks made throughout the oil fields since the Penberthy Reflex Gage was introduced.

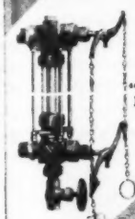
Note particularly the U-Bolt type of construction that is the strongest and the simplest to service. To replace a glass, simply remove the nuts on the face of the gage . . . it is unnecessary to work between the gage and the boiler.

The Penberthy Reflex Gage shown here is available in both Navy Bronze and Malleable Iron; it is recommended for working pressures to 350 lbs. at 450° F. Gage is furnished complete with Penberthy "Dripless" Drain Cock shown.

Other Penberthy Reflex Gages are made in any length desired for higher pressures and for various kinds of liquids. Any leading oil well supply distributor will be pleased to quote upon your particular requirements.

Automatic Injector

Ejector, Syphon or Jet Pump


"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

"All-Iron" Automatic Liquid Level Gage

Gas Engine Lubricator

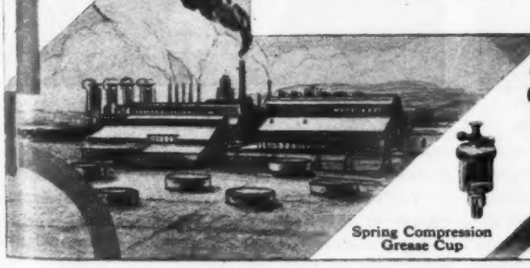
Snap Lever Oiler

Plain Brass Oil Cup

Plain Compression Grease Cup

PENBERTHY PRODUCTS

PENBERTHY INJECTOR COMPANY *Manufacturers of* QUALITY PRODUCTS *Since 1886*
DETROIT, MICH. • *Canadian Plant,* Windsor, Ont.



Screw Plunger Grease Cup

Spring Compression Grease Cup

Automatic Electric Sump Pump

Automatic Cellar Drainer (Water or Steam Operated)

Dipless Air Cock

Campact Meeting Set for Houston Show Week

Col. Ernest O. Thompson, chairman of the Interstate Oil Compact Commission, has called the next meeting of the commission to meet in Houston, Tex., at 10 a.m. in the Rice Hotel, October 14 and 15, during the Oil-World Exposition.

John R. Suman, president of Oil-World Exposition, Inc., invited the compact commission to meet in Houston on these dates and the Independent Petroleum Association of America will also hold its annual convention in Houston at the same time. Secretary of Interior Harold L. Ickes will speak before the I.P.A.A. banquet, October 15.

Governor James V. Allred of Texas has issued a proclamation designating October 15 as "Petroleum Day."

The Petroleum Division of the American Society of Mechanical Engineers will hold a meeting in connection with the Oil-World Exposition in Houston on the evening of October 12. The program will be under the sponsorship of the Exposition Drilling committee of which Joe Russell of Gulf Production Co. is chairman.

Several papers covering the mechanical phases of the petroleum industry are in preparation by members of the Houston division of the American Society of Mechanical Engineers. The program is being handled by the society's committee which consists of W. F. Herbert, Texas Co., chairman; W. P. Preston, Texas Gulf Sulphur Co.; W. W. Scott, Humble Oil & Refining Co.; F. M. Leverett, Texas Co.; D. D. Alton, Southern Pacific Lines; A. B. Steen, Jr., Humble Pipe Line Co., and Nathan Janco, Reed Roller Bit Co.

This meeting is one of a number which will be held in connection with the Houston oil show. Programs for all the conferences and meetings are now well under way with many of the papers already prepared. The programs will be given during the afternoons and evenings throughout the entire week of October 11 to 16, inclusive, during which the Oil-World Exposition will be held. The aim of the exposition is to disseminate data on operating methods for all branches of the industry as well as present a complete display of equipment for field and plant use.

The first of several universities with petroleum engineering courses to announce their displays at the Oil-World Exposition is the Rice Institute. In addition to showing moving pictures, the students at the Rice Institute booth will present several amusing as well as instructive devices. The students responsible for the booth are: Kenneth H. Baird, senior mechanical engineer in charge of the exhibit; Bob Burchfield, senior civil engineer; Clyde Dill and William Lane, senior chemists in charge of the chemical displays; and Tom Greve, senior electrical engineer in charge of the stroboscope exhibit.

In addition to the daily entertainment provided for visitors to the Oil-World Exposition, evening programs are being completed to offer special events of interest. The United States Army Band will give concerts; and at night, aviation searchlights will be operated outside the Coliseum by a group from the 69th U. S. Coast Artillery.

A special golf tournament has been scheduled for Wednesday, October 13, at the Brae-Burn country club. It is anticipated this will be the largest golf tournament ever held by the oil industry and all entries will be confined to men actually connected with the industry. This includes oil company personnel, manufacturers, supply men and drilling contractors. A number of firms have arranged to present prizes, and the exposition is giving a first prize, which will be a revolving trophy.

On Thursday night, October 14, there will be an all-star, oil-show wrestling match at the Houston City Auditorium. The exposition management has purchased 1,000 tickets, which will be resold to visitors and exhibitors at cost, and has reserved 500 additional seats to make sure everyone interested may be able to see the match.

A football game between Rice Institute and Tulsa University will be held on Saturday, October 16.

Standard Announces New Gasoline

CHICAGO—Anticipating the fuel requirements of the 1938 model automobile, Standard Oil Co. of Indiana has perfected a new gasoline which will be advertised during the fall and winter in some 1,600 daily and weekly newspapers in the central west. The newspaper advertising campaign will begin this week, and will feature a typical American newsboy in action. Terse copy in bold type will be used to present the facts about the fuel.

Changes in Shell Petroleum Corporation Officers

A. J. GALLOWAY

A. J. Galloway, vice president in the Mid-Continent district of Shell Petroleum Corp., with headquarters in Tulsa, has been transferred to Houston, Tex., as vice president in charge of the Gulf Coast district.

Rivkin

R. B. ROARK

Ralph B. Roark, production manager in the Kansas-Oklahoma-Panhandle district, with headquarters in Tulsa, has been promoted to vice president in the Mid-Continent area. He is succeeded as production manager in the Mid-Continent by R. W. Bond, division manager in Kansas, who thus returns to Tulsa after periods of service in Texas and Kansas. He is a graduate of the University of Pittsburgh, Pa.

T. E. SWIGART

T. E. Swigart, who has been vice president in charge of the Gulf Coast district at Houston, is being transferred to the executive offices of the corporation at St. Louis, Mo.

Texas Cut 93,540 Bbls. Under the September 18 Allowable

AUSTIN, Tex., Sept. 21—The Texas Railroad Commission Tuesday reduced October state oil allowables 93,540 bbls. from allowable as of Sept. 18, fixing a new allowable at 1,405,844 bbls., which is 24,456 bbls. under the U. S. Bureau of Mines allocation for Texas.

The October proration reduction is 35,890 bbls. from the state allowable of 1,441,743 bbls., first announced September 1. Changes by districts and new allowables were:

East Texas, 480,154, up 5,246; Panhandle, 71,540, decrease 4,690.

North Texas, 61,285, down 2,315; West Central Texas, 69,859, down 1,410; West Texas, 183,505, down 9,964; East Central Texas, 106,440; down 4,494; Southwest Texas, 240,594, down 4,940; and Gulf Coast 189,917, decrease 12,932 bbls. daily.

The statement by Col. E. O. Thompson that Texas allowable should be reduced in the neighborhood of 100,000 bbls. daily during October set off a bunch of fireworks at the state-wide hearing before the Railroad Commission today.

V. E. Cottingham, commission engineer, reported that bottom-hole pressure in the East Texas field had declined 12.89 pounds between August 12 and September 12 which he considered excessive and indicated need for readjustment of the allowable. Proration in East Texas is now 2.32 per cent and production September 16 was 478,210 bbls.

During the acrimonious discussion it was brought out that the commission was making a check for dead wells suspected of being used to inflate production. The increasing production of water may also be considered as a factor. It had increased from 60,000 bbls. in August to an estimated 70,000 bbls. daily in September, considered the equivalent of over 50,000 bbls. of oil in its effect on bottom-hole pressures. A water survey is being made.

Replying to S. A. Guiberson Jr., Mr. Cottingham said there were 23,550 wells in the field, with a density of one well to 5.6 acres. The allowable figures out about 3 bbls. to the acre, but, he said, it was excessive. If pressures were not maintained gas would be released from solution and if the water drive was dissipated millions of barrels of oil would be lost. There are 209 dead wells and they have been removed from the allowable schedule. Jack Blalock said almost all wells in East Texas are near the marginal limit of 20 bbls. and argued the federal court ruling would not permit taking production from good wells to favor the smaller.

Bryan Payne, East Texas operator, charging dead wells were making their allowables from other wells, asserted the Federal Tender Board was doing a better job of checking these wells. Some operators were, he said, discontinuing application for federal tenders and were producing on state paper. This provoked the retort from Colonel Thompson: "If you would spend more time cooperating with the commission you would accomplish a lot more." Payne said he "had tried to cooperate for six years and never got very far with it."

Allowable production for the state September 16 was 1,499,384 bbls., an increase of 57,650 bbls. over September 1. The Bureau of Mines recommendation for October is 1,430,000 bbls., or 69,384 bbls. under September 16 production.

Colonel Thompson's Statement

Col. Ernest O. Thompson, member of the Railroad Commission of Texas and chairman of the Interstate Oil Compact Commission, issued the following statement Saturday:

"The state of Texas has today 74,911 producing oil wells. This is an all-time peak in producing oil wells for Texas. Each month about 900 new wells are brought into production in this state. Each month about 100 wells are depleted and go out of production, so we are having a net gain of about 800 new wells in Texas alone each month. This, of course, means that the allowable production of each well in Texas must be reduced accordingly as only so much oil can be consumed.

"We are bringing in production much faster than it is being consumed. On September 18 the allowable production of oil as fixed by the Railroad Commission was 1,499,384 bbls. The Bureau of Mines estimate of market demand for Texas oil for each day in the month of October, 1937, is 1,430,300 bbls. Thus, it will be seen that the Texas allowable must be reduced by 70,000 bbls. per day in order to bring Texas production within market demand as required by law. Sufficient allowance in addition to this 70,000-bbl. reduction must be made also for the new wells which come in during the month. This amounts to about 30,000 bbls. So, it would appear that Texas, in order to be within the market demand, should reduce its present allowable production in the neighborhood of 100,000 bbls. per day.

"Evidence of the fact that more oil is being produced than purchasers are willing to buy is shown by the fact that several companies are only taking a percentage of the allowable. For example, in West Texas, notably North and South Ward, Shipley, Estes and Dobbs fields, the Atlantic Petroleum Purchasing Corp. has sent out notices to all producers and royalty owners in those fields to the effect that on September 25 they will reduce their purchases ratably from all leases approximately 35 per cent. This is very positive evidence that more oil is being offered than can be absorbed by the market. This condition prevails more or less generally and is due to the fact that we had reached an all-time peak this summer in the production of oil. It is also true that demand and consumption reached an all-time peak, but while demand increased 11 per cent, production increased 15 per cent. Now that the vacation season is over, the drop in consumption is drastic.

"There has been a new field discovered in Illinois. Naturally, refiners near that new field are drawing their supply from it, which in turn lessens the demand for Oklahoma and Kansas production. Drastic cuts in buying have been taken in Louisiana and New Mexico by the purchasers of crude.

"All this leads me to say that a survey of the situation convinces me that the regulatory authorities of the oil-producing states will promptly take cognizance of the decline in demand and will promptly bring production in line with consumption in order to prevent physical waste."

Two Mid-Continent Oil Buyers to Cut Purchases of Crude

Gulf Refining Co., sole purchaser of Lisbon, Louisiana, crude, has announced that after October 1, 1937, no more purchases of Lisbon oil will be made for the Gulf account. The company will, however, act as common carrier if a purchaser is found. It is reported that the reason given by the Gulf for closing its gathering lines was that the high percentage of sulfur in Lisbon crude made production from that field less desirable than certain other oils.

The Caddo Pipe Line Co. (Grogan Oil Co. of Shreveport) is clearing right of way for the laying of a 6-inch welded line from the Lisbon field, which is in Caliborne Parish, to connect with the pipe line system of the Arkansas Fuel Oil System, making connections in the old Homer field. The Arkansas company will transport the oil to Shreveport for delivery to the Grogan refinery there, but will not be able to take more than one-half of the daily allowable of the field.

Ward County Affected

The Atlantic Crude Oil Purchasing Co., one of the larger purchasers of crude oil in Ward County, Texas, notified operators in the field that effective at 7 a.m., September 25, it will reduce its daily runs from that area 36 per cent. This will effect 24,200 bbls. of its own and others' oil. Efforts are being made to have Gulf Oil Corp., Texas-New Mexico Pipe Line Co. and Wickett Refining Co. take over the oil thus deprived of a buyer.

In issuing the notice, the Atlantic company stated it had been purchasing crude oil in excess of its requirements as nominated to the railroad commission, but that it now finds it necessary to restrict its purchases immediately since the allowable seems improbable of conforming itself with the company's requirements.

Proration at Wellsville

WELLSVILLE, N. Y., Sept. 19.—Sinclair Refining Co. has notified local oil producers that the allowed crude production under present purchasing conditions has been reduced to 90 per cent, a drop of 10 per cent from the previous agreement. The 90 per cent mark is set for the month of September and succeeding months until further notice from the refinery.

Farish on Prices

NEW YORK, Sept. 21.—President W. S. Farish of Standard Oil Co. (New York), returning from Europe, said: "There is nothing in the statistical position of the oil industry to justify a general reduction of prices on either gasoline or crude oil."

National Safety Meeting Program at Kansas City

The 26th National Safety Congress and Exposition will be held October 11 to 15 in Kansas City, Mo. An especially interesting program has been prepared for the Petroleum section. Officers of the section are: General chairman, A. W. Breeland, Lone Star Gas Co., Dallas, Texas. Vice chairman, A. J. Martinson, Union Oil Co. of California, Los Angeles. Program chairman, R. B. Roaper, Humble Oil & Refining Co., Houston, Texas. Secretary, H. N. Blakeslee, American Petroleum Institute. Chairman, Atlantic Division, R. L. Simpson, Texas Co., New York City. Chairman, Mid-Continent Division, Kraus Earhart, Texas Co., Tulsa. Chairman Rocky Mountain Division, B. V. Osborn, Standard Oil Co. (Ind.) Casper, Wyo. Chairman, Gulf Division, D. B. Hiatt, Texas Pacific Coal & Oil Co., Fort Worth, Texas. Chirman, Pacific Division, L. K. Butler, Union Oil Co., Bakersfield, Calif. Chairman, Great Lakes Division, F. R. McLean, Socony-Vacuum Oil Co., Inc., White Star Division, Detroit.

Monday, October 11:

2 p.m. Industry's Responsibilities in Community Safety, H. W. Boggess, superintendent of safety, Sinclair Prairie Oil & Gas Co., Tulsa.

2:45 p.m. The Worker's Health, Dr. G. E. Kassebaum, Eldorado, Kans.

3:30 p.m. Can the Safety Engineer Make Effective Motion Pictures? — A Demonstration of What One Company Has Done, A. L. Anderson, Standard Oil Co. of California.

Tuesday, October 12:

2:30 p.m. Field Transportation Problems, J. U. Teague, division of petroleum engineering, Humble Oil & Refining Co., Houston, Tex.

3 p.m. Review of Unusual Refinery Accidents, R. T. Henderson, safety engineer, Standard Oil Co. (Ohio), Cleveland.

3:30 p.m. Handling Pipe, O. R. Burden, division superintendent, North Texas division, Texas Pipe Line Co., Wichita Falls.

4 p.m. Election of officers.

Wednesday, October 13:

2:30 p.m. Operating Marketing Motor-Vehicle Equipment, J. H. Brown, fire protection and safety engineer, Tide Water Oil Co., New York.

3 p.m. Lessons from Marketing Department Accidents, F. R. McLean, manager, safety and insurance department, Socony-Vacuum Oil Co., White Star Division, Detroit.

3:30 p.m. Does Gasoline Burn? (Demonstration), John T. Howell, fire protection engineer, Union Oil Co. of California.

Thursday, October 14, 12:30 o'clock, Joint Luncheon—Marine and Petroleum Sections:

Government Aid in Preventing Injuries to Longshoremen and Harbor Workers, Mrs. Jewell W. Swofford, chairman, U. S. Employes' Compensation Commission, Washington, D. C.

Address, Joseph P. Kennedy, chairman, U. S. Maritime Commission, Washington, D. C.

Statistical Review and Forecast of the Petroleum Industry, H. N. Blakeslee, director, department of accident prevention, American Petroleum Institute.

1937 Petroleum Section Safety Contest—Presentation of Awards.

2:30 p.m. The Art of Giving Complete Instructions, Ray L. Martin, State Board for Vocational Education, Austin, Tex.

3 p.m. Habit Formation Through Supervision, O. B. Badger, Tulsa Public Schools, Tulsa.

3:30 p.m. Forum on Natural Gasoline Problems. Discussion leader, G. W. McCullough, chief manufacturing engineer, natural gasoline department, Phillips Petroleum Co., Bartlesville, Okla.

Chemical Society To Meet

An excellent program has been planned and a large attendance is anticipated at the October meeting of the petroleum group of the Oklahoma section of the American Chemical Society. Program of the meeting, which is to be held October 2 in the First Christian Church, Tulsa, Okla., is as follows:

Afternoon Program

Symposium on lubrication and lubricating oils, arranged by H. T. Bennett, Mid-Continent Petroleum Corp., Tulsa.

D. F. Barnard, Standard Oil Co. (Indiana), "The Role of Viscosity in Lubrication."

G. H. Freyermuth, Standard Oil Co. (New Jersey), "Hypoid Gear Lubricants."

W. L. Nelson, University of Tulsa. "Production of Light Lubricating Oils by Vacuum Decomposition."

Evening Program

Dr. C. K. Francis, Technical Editor of The Oil and Gas Journal, will give a talk based on observations during his recent trip to Europe in connection with the International Petroleum Exposition.

The officers of the petroleum group for this year are: W. W. Scheumann, Cities Service Oil Co., president; B. W. Logue, Texas Co., vice president; and G. D. Byrkit, Continental Oil Co., secretary.

Strike Settled in Mexico

Settlement of the strike of oil workers in the Poza Rica oil field of Mexico was reported in a dispatch from Mexico City dated September 15. The strike, which affected principally operations of the Mexican Eagle Oil Co., Ltd., had lasted 57 days. The Union of Petroleum Workers has ordered the 400 strikers to return to work after the company, according to the dispatch, agreed to pay the strikers 75 per cent of their wages for the strike period and 25,000 pesos (about $6,950) to the union for strike expenses.

The Poza Rica field is one of the most important in Mexico, producing normally about 60,000 bbls. of crude oil daily. The strike resulted in almost total stoppage of production as well as pipe line operations. Solution of the strike is said to have followed a warning by Lazaro Cardenas, the president of Mexico, that continuation of the conflict was opposed to the country's welfare.

Recommendations of a government committee with respect to the labor controversy involving the entire oil industry of Mexico are still before the Federal Board of Conciliation and Arbitration. Settlement of the Poza Rica strike is regarded by some as the first step toward the settlement of the national conflict.

ILLINOIS OUTLOOK

(Continued from Page 25)

among major concerns. Seismography is being exploited, it is true. Every area shot over is said to be on a seismograph high. Unfortunately the layman does not discriminate, and believes every area shot over must show a structural high. Enough has been done to demonstrate the value of shooting. However, in a few areas seismograph results can be checked by surface geology, and in nearly all cases by shallow well testing. The structures reflected by the Pennsylvanian beds can be outlined with shallow tests at depths of 100 to 200 feet. A shooting high can be checked with a few well placed holes and either proven or eliminated. Further, any subsurface evidence of highs can be readily checked in detail by shallow test holes to a key bed. Undoubtedly, as shooting conflicts continue, much shallow well testing will be employed to check the structures.

In time sufficient subsurface evidence will be available to outline trends and to substantiate shooting. Illinois is just beginning a campaign of expansion that should result in the opening of 100 or more new fields. The state has produced close to 430,000,000 bbls. of oil to date, according to Bureau of Mines figures.

In the writer's opinion the new fields in the state—those brought in this year and those to come—will double the quantity of crude oil the state has already put out. The Clay City field in Clay County will be a major field. The writer has reached the conclusion—against his judgment at first—that the Clay City field will extend at least 8 miles in length, and average close to 2½ miles in width, or 20 square miles, and that it will produce 60,000,000 bbls. of oil at least, and in all likelihood far more. An early estimate limiting new Illinois pools to not more than 4,000 acres in extent is subject to revision upward.

Drilling costs, under contract, range from $3.75 per foot at Patoka in Marion County, to $5.50 per foot in Clay County. Such costs will be lowered appreciably due to competition. Deep testing, from 6,000 to 7,000 feet, should be done with combination tools; drilling to the Ste. Genevieve with rotary tools, and with standard cable tools for the 3,000 feet or more below, which is mainly limestone, with much chert (impure quartz) throughout. Production in the deeper horizons in the basin is problematical.

Some producers and operators anticipate a heavy production from the St. Peter sandstone because of its relationship to the Wilcox of Oklahoma. There have been a number of tests to the St. Peter in the Monroe County field and in Schuyler County, and three tests have been drilled in Clark County, two to depths of over 3,411 feet in the producing fields, and one to 5,190 feet in Lawrence County; all tests being negative and at least four being on structure. A similar number of structures in Oklahoma or Kansas would hardly be tested without opening one or more Wilcox fields. While it may produce, little encouragement is seen for the St. Peter sandstone. The Lower Mississippian, the Niagaran, Devonian and Trenton beds of the Ordovician should all produce oil in the deep Illinois Basin, and tests of such horizons, 5,000 to 6,000 feet deep, are justified.

Illinois is not going to prove a flash in the pan; it has real oil possibilities. Too many oil operators are rushing in and selecting drilling blocks without careful checking, and the resulting dry holes will slow down operations. This is a healthy condition, as prices are far too high. Royalties are as high as $200 to $300 base around drilling wells, and $20 to $30 bases are usual 50 miles from production.

Leases are few and range from $1 to $50 per acre; as high as $50 having been paid for tracts 10 miles from production.

Kowabunga.Dinosaurs

A New IDEAL POWER PUMP

"Reg. U. S. Pat. Off."

The Type D-50 Duplex 5" x 10" for oil gathering, water, slush and other high pressure oil country service.

Complete piston, valve and liner equipment for all types of service.

★

Frame section carries load in straight planes from bearings to fluid end for maximum strength.

★

Crank and pinion shaft bearing caps cast integral with frame cover allows stronger frame design, and convenience for disassembly.

★

Special baffle wall and plate with oil seal and rod wiper effectively excludes slush and other liquids from power end.

★

Intermediate rods make it unnecessary to open crank case to change pistons and liners.

★

Sykes Herringbone Gears generated by National combine efficiency, quietness and minimum wear.

★

Alloy iron fluid end 1000 pounds working pressure.

★

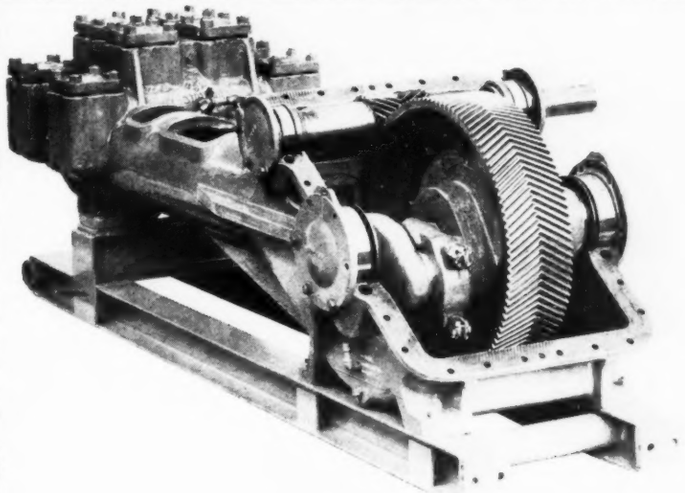
Timken crankshaft bearings and SKF self-aligning roller bearings on pinion shaft.

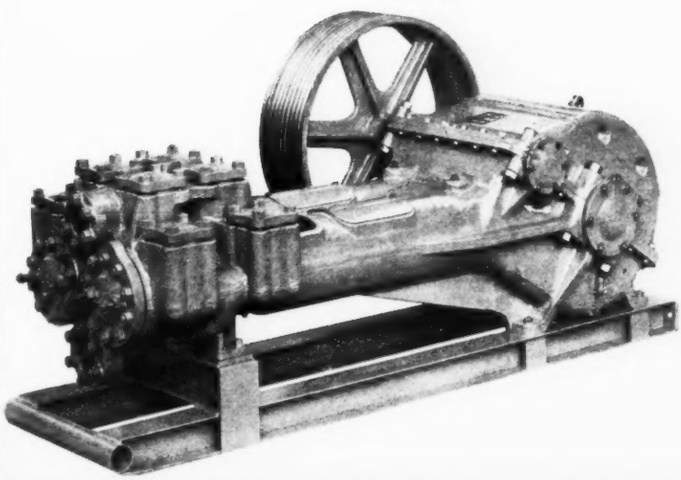
★

Fluid passages and valve openings designed to eliminate unnecessary flow resistance.

★

Automatic flood lubrication to working parts—Roller bearings on shaft are grease packed through outside connections.





NSCO
REG. U. S. PAT. OFF.

National

THE NATIONAL SUPPLY COMPANY OF DELAWARE

DIVISION OFFICES: PITTSBURGH, PA., FORT WORTH, TEXAS, TULSA, OKLA., TORRANCE, CALIF. · MAIN OFFICE: TOLEDO, OHIO

Refinery Expansion

Humble Enlarging Office Space

HOUSTON, Tex.—Humble Oil & Refining Co. has announced plans for the construction of a $72,400 annex to the office building at the Baytown refinery. The new building, a two-story 43 by 121-foot brick and concrete addition, will house the administrative executive offices and a conference room. Its construction will allow the return to the main office building of several departmental offices which have previously been temporarily housed about the plant.

Refinery for Bellevue Field

SHREVEPORT, La.—Final plans have been completed for the construction of a modern lubricating oil refinery near the Bellevue field of Webster Parish, Louisiana. The Co-Service Oils, Inc., is to be headed by Douglas MacDonald of Shreveport, former sales manager for Bayou State Oil Corp., and was recently formed for the purpose of building the Bellevue plant. It will be situated at Princeton, La., on the L. & A. Railroad 4 miles southwest of the Bellevue field.

It is reported that the plant will be a continuous two-stage atmospheric and high vacuum distillation process. A small grease manufacturing and oil compounding plant are included in the plans. A complete line of gas and diesel oils, neutrals, motor oils, road oils and flux are to be processed. Construction work was scheduled to start in September.

Continental Enlarging Refinery

DENVER, Colo.—Continental Oil Co. has begun enlargment of its Denver refinery at a cost of approximately $400,000. The plant was built in 1930 with a charging capacity of 2,000 bbls. per day and has been operated at capacity during the intervening period. It will be increased to 4,000 bbls. per day. Improvements include heating unit, fractionating towers, pumps, etc., additional storage for crude and refined products and additional trackage facilities.

Ark-La-Tex Refiners Meet

SHREVEPORT, La.—More than usual interest was manifested in the program for the regular monthly meeting of the technical group of the Ark-La-Tex Division of Western Petroleum Refiners Association, held in Shreveport on September 17. Dr. C. W. Rippie, Solvey Sales Corp., St. Louis, Mo., delivered the principal address on "Refinery Operations Using Caustic Soda in Treating Gasoline." The usual open forum discussion followed, with active interest being shown in the subject.

Grease Manufacturers Meet

The program for the Fifth Annual Convention of the National Lubricating Grease Institute contains many papers on subjects of timely and practical value. The Institute will hold this meeting at the Blackstone Hotel in Chicago October 4 and 5.

The program includes the following:

October 4, 10:00 a.m.

Addresses of Welcome, by H. F. Wilhelm, President.

"Institute Publicity Activity," J. C. Bachrodt, Rogers, Gano & Gibbons, Inc.

"Hypoid Gear Lubrication," H. C. Mougey, General Motors Corp.

"Roller Bearing Lubrication Problem," Oscar Maag, Timken Roller Bearing Co.

"Chassis Lubricants and Lubrication," W. S. James, Studebaker Corp.

"Temperature Measurement in Grease Kettles," F. E. Huggins, Jr., Sowers Manufacturing Co.

"A Challenge to Lubricant Manufacturers and Marketers," James Keller, The Chek-Chart Corp.

October 5

"Laboratory Equipment and Methods for Testing Lubricating Grease," Ralph R. Matthews, Battenfeld Grease & Oil Corp.

"Lubrication Problems, Presented by Different Types of Ball Bearing Applications," H. R. Reynolds, Fafnir Bearing Co.

"Grease Lubrication Requirements In Steel Mills," C. C. Pecu, Lackawanna Steel Co.

New Louisiana Plant Announced

SHREVEPORT, La.—Work will be started at once by the Octane Oil & Refining Co., Longview, Tex., on the construction of a refinery costing between $500,000 and $1,000,000 at Cotton Valley, La., it was announced this week by the state department of commerce and industry. Decision to place the refinery in Louisiana was announced following a conference between Sylvester Dayson, president of the company, Gov. Richard W. Leche and members of the state board of industry. It was reported the refinery would have a capacity of 3,000 bbls.

General American To Build

HOUSTON, Tex.—General American Tank Storage & Terminal Co. has announced plans for the construction at Corpus Christi, Texas, of a refinery to process Southwest Texas crudes. The plant will be of skimming type, and will have a capacity of about 6,000 bbls. per day. Together with the refinery project, the company will erect a plant for the construction and repair of tankers. The General American maintains a tank farm at Corpus Christi harbor, with present storage capacity of approximately 1,000,000 bbls.

The new refinery, processing the crude handled in the terminal, will be located on the site of the tank farm, which already is the location of two other plants, Amsco Refining Co. and Southwestern Refining Co. Cost of the new project, including refinery, tankcar plant and a precooling plant for vegetables and other perishable commodities, is estimated at $1,000,000.

Carle Purchases Plant

HOUSTON, Tex.—The Carle Gasoline Co. of San Antonio has purchased the 700 bbl. local refinery of the Ranne Refining Co. Improvements on the plant are under way, and the new owners contemplate the construction of a cracking unit. East Texas crude will be run in the refinery, which will be operated in connection with a system of retail outlets owned by the Carle Co. in the San Antonio vicinity.

Michigan Refinery Completed

SAGINAW, Mich.—This week will witness the opening of the Alma refining plant of Northern Refineries, Inc., near the Ann Arbor railroad terminal. The plant will obtain its supply of crude from the McClanahan-Leonard Pipeline Co., under a five-year contract guaranteeing delivery of 2,500 bbls. daily. When this refinery goes into operation Alma will have three, with a fourth preparing for operation. The two already operating are Midwest Refineries, Inc., and Leonard Refineries, Inc. Lube Oil Corp. is rejuvenating the old Wolverine Refinery Co. plant for the production of lubricating oils.

Northern Refineries is headed by J. H. Fitchert of Detroit, with Fred Thomas, Detroit, as secretary; Freeman C. Mapes, Alma, treasurer; and Harvey S. Taggart, formerly of the Bowling Green Refining Co. at Bowling Green, Ohio, as plant manager. The directorate includes William Mielkey, Detroit, E. G. Guy, Carson City, and David E. Beach, McClanahan-Leonard Pipeline Co. executives.

Add Solvent Refining Unit

A new solvent refining plant is being constructed for the Standard Oil Co. of California at the Richmond, Calif., refinery to increase the production of high-viscosity index lubricating oils. This plant includes a Duo-Sol refining unit and a methyl-ethyl-keytone dewaxing plant.

The Duo-Sol plant will have a charging capacity of 3,500 bbls. per day of residuum from high cold test California crude when producing finished lubricating oil of 90-95 V.I. The refined waxy oil from the refining plant will be dewaxed to zero pour-point using a mixture of methyl-ethyl-keytone and benzol. Yields are expected to be about 40 per cent in Duo-Sol treating and 72 per cent dewaxing, resulting in a finished oil production of approximately 1,000 bbls. per day. The dewaxed oil will be distilled to produce a complete line of high-viscosity index motor and aviation oils.

This plant is scheduled for operation in June, 1938. E. B. Badger & Sons Company have been given the contract for construction of the dewaxing plant, which is licensed under the Texas Company patents. The Duo-Sol process is licensed by Max B. Miller & Company, who will also act as construction contractor.

A hydrogenation unit is now being constructed at the Richmond refinery, primarily for the production of high octane aviation gasoline. It is anticipated that the plant will be in operation by the first of the year.

The plant will charge polymers produced by the new process recenty developed and installed at Richmond by which gas from the cracking plant is converted to gasoline.

The hydrogenation plant is licensed by the Hydro Patents Co. and is designed to operate at a pressure of 3,500 lbs. per sq. in. The rated capacity will be approximately 1,000 bbls. per day of base stock which can be blended to meet aviation gasoline specifications up to 100 plus octane. The plant is also designed for the hydrogenation of other products.

May Tax Fullers Earth

AUSTIN, Tex.—The State of Texas is considering the levy of a tax on the production of fullers earth, of which large deposits are found within the state. Albert K. Daniel, tax commissioner for the state, has suggested the investigation of such a tax as an additional source of revenue to be indirectly levied on the oil industry. Fullers earth is extensively used as filter medium in the refining of petroleum products.

Natural Gasoline

To Build Southwest Texas Plant

Warren Petroleum Co., Tulsa, Okla., has announced construction of a new natural gasoline plant in the McCampbell field of Aransas County, Tex., will be started about November 1. The plant will be of the absorption type, operating at well pressure, and will process approximately 80,000,000 feet of gas daily. Materials for the plant have been ordered, and upon their receipt construction will be started.

Pipe Line Activity

Casinghead Line

Phillips Petroleum Co. has let contract for a pipe line from the booster station of the Panhandle Eastern Pipe Line Co., near Liberal, Kans., to La Verne, Okla. The line will connect with Phillips' main line from Borger to Bartlesville. J. R. Stewart Co. has been awarded the contract to lay the line, which will carry casinghead gasoline from the Panhandle Eastern plant near Liberal. Heretofore, the natural gasoline has been shipped by tankcar.

New Line from Saxet

HOUSTON, Tex.—A new pipe line, and enlargement of terminal storage facilities in the Corpus Christi district of Southwest Texas is planned by the M.A.R. Pipe Line Corp. A line will be laid from production in the Saxet field, to the nearby Corpus Christi turning basin, where storage facilities of the Terminal Refining Co. and Export Oil Storage Co. will be enlarged by 250,000 bbls.

Humble Dickinson Line

HOUSTON, Tex.—Construction of a 24-mile pipe line from the Dickinson oil field in Galveston County to Humble Oil & Refining Co. plant at Baytown was announced by company officials who applied to the army engineer's office in Galveston for a permit to cross Clear Creek near Webster, paralleling a line running from the Webster field.

Avoca Field Line

FORT WORTH, Tex.—Preparations have been started by Humble Pipe Line Co. for construction of a 4-inch line into the new Avoca field in northeastern Jones County. The line will be extended from Humble's present connection in the Bluff Creek field in western Shackelford County. Actual connection in the new field probably will be made the first week in October.

Continental Not to Build

FORT WORTH, Tex.—Humble Pipe Line Co. has resumed work on its 6-inch line from the Wasson area of northwestern Gaines County to its Hobbs, N. Mex., station. Decision to resume work was reached after a conference with Continental Oil Co. officials. It was learned Continental would not build its carrier from the Wasson area to the Means pool of Andrews County.

The Humble line will extend approximately 29 miles from the Hobbs station to the Wasson area and to the northeast another 12 miles to the Bennett pool of Yoakum County.

Jennings Line Completed

HOUSTON, Tex.—Continental Oil Co. 12-mile 6-inch welded oil line from the Jennings field to the company terminal at Lake Charles has been completed and is now in operation. The company has completed an additional 80,000-bbl. storage tank at its terminal site at Lake Charles and one of the same capacity at the Tepetate field in Acadia Parish which enlarges its storage capacity to 485,000 bbls. A booster station is scheduled to be completed next week which will boost the present capacity of the line from 9,000 to 14,000 bbls. daily.

New Burford Line

SHREVEPORT, La.—Right of way for a 6-inch line from its plant site at McCoy, north of Rodessa, to the Texas Pipe Line Co. receiving station in section 38-23-16, was reported being surveyed by the East Texas Pipe Line Co. (F. W. Burford). The East Texas Co., it is reported, has arranged for delivery of 3,000 bbls. daily to this station for transportation to the coast.

Salem, Michigan, Project

SAGINAW, Mich.—Delay in the construction of a pipe line reported badly needed by the Salem oil field in Allegan County has come through the State Public Utility Commission's adjournment to November 9 of the hearing on the application for permission to construct the line.

The permit is sought by Gerrit VanDerLeest of Muskegon, who seeks to lay a pipe line from Burnips, in the Salem field, to Macatawa Bay at Holland, the nearest Lake Michigan port. Mr. VanDerLeest asserted existing market outlets are capable of handling only 1,400 bbls. daily, whereas the field's output is approximately 6,000 bbls. daily. The pipe line plans include tanker service between its terminus at Holland and refineries at Whiting, Ind.

Mr. VanDerLeest estimated the Salem field's potential oil resources at 9,000,000 bbls.

Laying Panhandle Eastern loop in Kansas

Potter In Fault Line Fields

HOUSTON, Tex.—Potter Pipe Line Co. of Corpus Christi, Tex., has recently purchased production in the Buchanan field of Caldwell County, and is considering the construction of a pipe line to serve the rapidly developing production of the various Fault Line fields of Caldwell and Guadalupe counties. Potter sold a pipe line system in the Corpus Christi district several weeks ago to the Amsco Pipe Line Co.

To Loop Wyoming Gas Line

DENVER, Colo. — Deals are being negotiated whereby Standard Oil Co. of Indiana will obtain its supply of natural gas for its Casper refineries from the Big Sand Draw and Muskrat gas fields in Fremont, Wyo., through Northern Utilities Co., instead of the Mahoney and Wertz domes in Carbon County. To facilitate the deal the Casper city council granted Northern Utilities Co. an extension of its local franchise to March 1, 1960, 20 years before date of expiration of the present franchise.

Stanolind Pipe Line Co. and Sinclair-Wyoming Oil Co. will sell their 14-inch line from the Carbon County fields to Casper to Northern Utilities Co., which will take up the pipe for the looping of its line from Fremont County. One loop will start 5 miles west of Poison Spider and will parallel the main line for a distance of 13 miles to Emigrant Gap, where the Mahoney-Wertz line crosses the Big Sand Draw line. A loop 40 miles long will parallel the main line from the junction of the feeder line from Muskrat to the Sand Draw-Casper main line. Present Carbon County line from Emigrant Gap to Casper will continue as a part of the system. Improvements will cost $300,000 at present and $150,000 additional at a later date.

Natural Gas News

Fort Wayne Rates

Reduced gas rates were specified in an ordinance before Fort Wayne, Ind., city council, authorizing Northern Indiana Public Service Co. to pipe natural gas into its Fort Wayne mains from lines of the Michigan Gas Transmission Corp. Reductions range from 12.27 per cent for residential users to 17.03 per cent for industrial, Thomas J. Kelly, division manager of the company, said the change would result in a saving of $3 a year to the average residential consumer. Gas officials in communities surrounding Fort Wayne seek natural gas from Northern Indiana Public Service Co.

Monroe Gas Valuation

MONROE, La.—A proposed $500 increase in the assessed valuation of wells in the Monroe field to $2,000, by the Louisiana tax commission, is being protested by gas well owners in Ouachita Parish. The Ouachita Parish policy jury is opposed to any increase in the valuation.

It has been pointed out by operators that wells in Ouachita Parish have decreased considerably in value and many wells are producing so little gas as to be practically without value except for casing which might be recovered.

A recent report shows that there are 549 producing gas wells in Ouachita Parish.

Dallas Rate

DALLAS, Tex.—Fort Worth's recent natural gas rate cut, ordered by the Railroad Commission, has led Dallas officials to seek the same reduction. City Attorney H. P. Kucera explained the action was merely to make sure that Dallas has the same rate structure as Fort Worth.

The Railroad Commission's order is now being fought in court. If the commission is upheld, then and only then a similar ruling for Dallas would go into effect, Kucera said.

Delaware Franchise Approved

DELAWARE, Ontario.—Ratepayers of the village of Delaware have approved the granting of a natural gas franchise to the Union Gas Co. of Canada, Ltd., by a vote of 68 to 0. Gas will be supplied from the company's Dawn-London main transmission line.

W. J. Wilson and H. T. Carpenter Are Promoted by Ohio Oil Company

W. J. Wilson, formerly with the secretary-treasury department of Ohio Oil Co. in Tulsa, has been named head of the land department to succeed the late J. Kirby Warren. Mr. Wilson has been with Ohio Oil Co. and associated companies since 1919 when he was employed by Transcontinental Oil Co. in Pittsburgh, Pa. He was transferred to Tulsa in 1925. When the Ohio acquired the interests of Transcontinental in 1930 he was made assistant secretary of Marathon Oil Co., Mid-Continent subsidiary of Ohio Oil Co.

W. J. WILSON

H. T. CARPENTER

H. T. Carpenter has been appointed chief scout of Ohio Oil Co. with headquarters in Tulsa. He began work 20 years ago in Findlay, Ohio, in the map and drafting department of Illinois Pipe Line Co., transportation subsidiary of Ohio Oil Co., and in 1918 was transferred to Ranger, Tex., and became secretary to M. E. Wagner, general production superintendent. In 1926 he joined the scout department and covered the West and North Central Texas district. After nine years he was transferred to the Oklahoma City office from which he has been transferred to Tulsa and made head of the newly formed scout department.

Frank R. Clark, vice president in charge of geology for Ohio Oil Co., announces appointment of Forrest W. Hood as district geologist with headquarters in Enid, Okla., and Will E. Earl district geologist for the Ardmore, Okla., district. Mr. Hood is a graduate of the University of Oklahoma in 1925 and joined Mexico-Ohio Oil Co. soon after graduation and was stationed in Mexico for some time. He was in Texas for Ohio Oil Co. until 1928 when he was transferred to Oklahoma.

Mr. Earl was born in Mount Hope, Kans., and secured his college training at the Fairmont College, Wichita, Kans. Upon graduation in 1920 he worked for Oklahoma Central Oil Co. and joined Transcontinental Oil Co. in 1921, becoming connected with Ohio Oil Co. in 1930 when Transcontinental was absorbed.

Fourteen Are Subpoenaed As Madison Witnesses

MADISON, Wis., Sept. 20.—Subpoenas have been issued so far for 14 witnesses in the trial of oil companies opening in federal court here October 4 on antitrust law conspiracy charges, government attorneys disclosed today. The prosecution estimated it will call at least 60 witnesses in all to support indictments charging that 26 corporations and 58 individuals conspired to raise gasoline tank-wagon prices in the Middle West.

Among the 14 already summoned is Keith Fanshier, petroleum editor of the Chicago Journal of Commerce. Appearance of Mr. Fanshier, himself a defendant, will automatically entitle him to immunity as a government witness. Others subpoenaed include several representatives and employes of defendant companies, among them being Walter Paul Jacobi, Tulsa, of Wadhams Oil Co.; L. S. Wescoat, Chicago, secretary-treasurer of Pure Oil Co.; Neil Buckley, Tulsa, of Cities Service Export Oil Co., and J. P. Mosher, Jr., Cleveland, Ohio, National Petroleum News.

Government attorneys from Washington arrived here today to complete preparations for the case. Appearance will be made Tuesday before Judge Patrick T. Stone at Superior, Wis., on a motion by John F. O'Ryan, New York attorney, for a separate trial on behalf of Barnsdall Refining Co. and its president, E. B. Reeser, of Tulsa. A severance motion also is anticipated on behalf of Frank R. Coates, New York, vice president of Cities Service Oil Co., who is seriously ill.

If the Coates and Reeser motions are granted, the number of individual defendants standing trial at this time will be reduced by eight.

The government already had announced that Mr. Fanshier and Bernard L. Majewski, Chicago, Deep Rock vice president, both witnesses before the indicting grand jury, would not be called to trial in October. Appeals pending on removal orders also will delay trials of four Gulf Oil officials—J. F. Drake, W. V. Hartman and H. C. Mayer, all of Pittsburgh, and O. H. Carlisle, Houston, Tex.

Federal Gasoline Tax Suit

Suit by Continental Oil Co. to recover nearly $750,000 of federal taxes on oil and gasoline, paid under protest, is being heard in federal court at Oklahoma City. The company discovering the act of 1932 taxed producers who marketed their own gasoline but not dealers who were not producers, an emergency amendment levying taxes on all sales was prepared but it failed to pass when unanimous consent to suspend rules was not obtained. The company sold gasoline and oil to Conoco, a Delaware marketing corporation, and the Continental Oil Co., a Nevada corporation, on June 20, 1932, so that when the act became effective June 21 the products would be in possession of marketing companies not themselves producers.

THE MARKETS*

CRUDE OIL: *An increase of 49,877 bbls. a day in production in the United States in the past week almost offset a 52,123-bbl. daily decrease in the week before. Overproduction of crude will affect areas in Louisiana, Texas and Kansas, as some purchasers have taken action which will lead to that condition.*

REFINERY: *Tankcar gasoline continues quiet in Middle West, but on East Coast and West Coast is steadier. Natural gasolines advanced in Mid-Continent. Burning oils and gas oils feeling effect of cooler weather in northern central states.*

TANK WAGON AND SERVICE STATION: *Continued good motoring weather reducing amount of price cutting in some unsettled areas. Conditions on Atlantic seaboard somewhat improved.*

FINANCIAL: *Price levels of 30 active oil stocks in the week ending September 18 were lower than in the previous week. Last week high 37.31, low 34.19 and close 35.30. Previous week's high 38.52, low 34.93 and close 35.59.*

**Details in Market Section.*

Mid-Continent Association

President J. D. Collett, of the General Mid-Continent Oil and Gas Association, announces that the annual meeting of the directors of the Mid-Continent Oil and Gas Association will be held at Tulsa Tuesday, December 14.

President Robert S. Kerr announces that the annual membership meeting of the Kansas-Oklahoma division will be held at 2 p.m., Friday, November 19 in the Tulsa Club, Tulsa.

President L. M. Moffitt and Secretary A. R. Campbell, of the Louisiana-Arkansas division, announce that the annual membership meeting of the Louisiana-Arkansas division will be held in the Slattery Building, Shreveport, La., Wednesday, October 27.

International Exposition

Six firms have taken 17,895 square feet of the new outside exhibit space along the new street at the Tenth International Petroleum Exposition in Tulsa, May 14 to 21, 1938, General Manager William B. Way announced.

Fuel Oil Chief Topic

WASHINGTON, D. C.—Opening with an address by Leod D. Becker, Fuel Oil Journal, on "How Much Fuel Oil and at What Price," the National Oil Marketers Association announced the entire afternoon program for Wednesday, October 13, will be devoted to a discussion of "Fuel Oil" problems. The annual convention will take place October 12-14 at the Stevens Hotel, Chicago.

Milton A. Powers, chief engineer, Timken Silent Automatic Division, Timken-Detroit Axle Co., Detroit, will present a paper on "Fitting Fuel Oil Specifications to Burner Performance." Mr. Powers is chairman of Technical Subcommittee "E" on Burner Fuels, Committee D-2 of the American Society for Testing Materials.

New Tender Board Member

WASHINGTON.—The interior department announces appointment of Edward W. Chatterton as a member of the Federal Tender Board No. 1 at Kilgore, Tex., to assist in the enforcement of the Connally "hot-oil" act. Chatterton has been in government service for 30 years serving the post office and treasury departments. He is now a special agent for PWA in Kansas.

16.8-LB. MIX

TEMPERATURE 200°...'STARCOR' PUMPED LIKE DRILLING FLUID

TO land 8900 feet of 10" casing in a 12¼-inch hole takes lots of know-how. Engineers and crew certainly did their stuff. And so did the cement. Bottom hole temperature, 200 degrees—hot enough to make ordinary cement set before a hundred sacks could get around the casing. 'Starcor' made another tough job easy. 550 sacks . . . mixed 16.8 lbs. to the gallon . . . pumped into position in 1 hr., 22 min. . . . top pump-pressure only 1500 lbs.

Yes—new days, new ways. That is why we perfected 'Starcor'—for deep wells, high temperatures and extra sulphate-water resistance. In wells of moderate depth, 'Incor' has the call—a 10-year success record on thousands of wells.

'Starcor' and 'Incor' both have lower viscosity, pump easily in heavy slurries—no thinning down necessary. Controlled setting time protects in case of cementing delays. Once in place, they harden rapidly, give quick protection. Both cements can be drilled out sooner. Use an Oil Man's cement—'Starcor'* or 'Incor',* depending on the job. Your dealer stocks them both, for immediate service. *Reg. U. S. Pat. Off.

TWO PORTLAND CEMENTS—BOTH MADE FOR OIL WELLS

USE 'STARCOR'—for deep wells, high temperatures or extra sulphate resistance.

USE 'INCOR'—for wells of moderate depth.

LONE STAR CEMENT CORPORATION

MAKERS OF "INCOR" AND "STARCOR" CEMENTS

Oil News from Foreign Lands

Argentine Marketing Policy

Threat of a monopoly of gasoline sales in Buenos Aires by the Yacimientos Petroliferos Fiscales (the Argentine government owned oil company) has subsided for the present. A satisfactory working basis for the continuance of operations in Argentina has been obtained by the foreign owned oil companies, including Standard Oil Co. (New Jersey) and Texas Corp. subsidiaries along with Royal Dutch-Shell units, in an official decree approving the tripartite agreement, price of gasoline was set at 23 centavos per liter, or 29 cents a gallon. Reversion from the trend to exaggerated nationalistic policies of the Argentine government seeking to exercise complete control of the production, refining, importation and distribution of oil in the country through Y.P.F. has been accomplished through a recently executed marketing agreement which extends through 1940.

Complete text of the agreement between Standard, Shell and Y.P.F. is not yet available, but one of the provisions prohibits any of the signers from entering into any agreement with any organization or body, including a government entity, for the purpose of establishing a monopoly. Through this one provision in the agreement, the Buenos Aires Municipal Council, which has proposed granting a monopoly contract to the Y.P.F., will be prevented from doing so at least during the next 3½ years.

Until the current marketing agreement was negotiated, foreign owned oil companies in Argentina were in an extremely precarious position, chiefly through the possibility the Buenos Aires territory might be closed to their products. Prior to the unrest which first developed in 1936, the Argentine government had indicated its leanings to nationalistic trends by establishing a uniform retail price for gasoline throughout the country. Furthermore, future oil exploration and drilling in Argentina is restricted to the national territories, where Y.P.F. alone is permitted to operate.

The series of events which threatened extinction of all foreign oil companies in Argentina was launched on a more aggressive basis in July, 1936 when an executive decree gave Y.P.F. absolute control of imports of petroleum products through quotas assigned by that organization. The intention was to build up Y.P.F. national production and gradually eliminate imports, a procedure which, if followed to the ultimate, would result in forcing foreign oil companies out of business.

In October, 1936, the Buenos Aires Municipal Council passed an ordinance granting Y.P.F. exclusive rights to the sale of gasoline in the federal capital area. Foreign oil companies appealed to the president in an effort to base retail gasoline prices in other areas on a cost plus arrangement, but were unsuccessful.

The Buenos Aires monopoly ordinance was vetoed in part on November 12, 1936, by the mayor and the municipal council asserted that since one article had been vetoed the entire ordinance had been invalidated. On the basis of counsel's opinion that the ordinance was valid with exception of the vetoed article, the mayor signed a contract with Y.P.F. on April 26, 1937, providing the monopoly should go into effect on July 1, 1937. The contract was annulled on May 21, 1937, when the municipal council officially voted to throw out both the ordinance and the supplementary contract as null and void.

Yielding to the opinion of the council, the mayor issued a decree July 1, 1937, formally suspending the application of his contract with Y.P.F. The Y.P.F. contract with the mayor of Buenos Aires was never actually put into effect, due to the conflicting opinions of the councilmen and the mayor. Opposition to the measure has been considerable both in the press and among influential Argentine individuals and organizations, who have opposed it on economic as well as constitutional grounds.

Another monopoly plan proposed by the Buenos Aires council appears to have been temporarily killed in view of the agreement signed between the three companies. The plan, offered by councilmen as a substitute while differences of opinion on the original monopoly ordinance were aired, would have closed the Buenos Aires market to foreign companies at the end of 10 years. It was proposed that Y.P.F. supply 40 per cent of the Buenos Aires market in 1938 with a gradual increase to reach 100 per cent in 1948. This compromise now seems to have been sidetracked by the agreement between Standard, Shell and Y.P.F., at least for a period of 3½ years.

While Y.P.F. crude oil production is gradually increasing it is still far below Argentina's requirements. During the first half of the current year, Y.P.F. produced 3,900,254 bbls., an increase of 14.54 per cent over the first six months of 1936 when output totaled 3,404,975 bbls. The Comodoro Rivadavia field continues the chief source of Argentina crude oil production and is the pool contributing the bulk of Y.P.F. petroleum. The production by Y.P.F. for the first six months of 1937, compared with 1936 is listed below by fields:

(Y.P.F. production in barrels)

Field—	Six months 1936	Six months 1937
Comodoro Rivadavia	3,049,730	3,458,353
Plaza Huincul	234,862	247,713
Salta	99,504	157,212
Mendoza	20,879	36,013
Jujuy	.....	963
Total	3,404,975	3,900,254

A report received from Argentina regarding oil operations and published in the August 2, 1937, issue of The Oil and Gas Journal, appears to have been partly in error. Information received locally states that a well being drilled by the government oil organization "Y. P. F." was not located on acreage taken over from Texas Corp., the well mentioned being some 200 kilometers from the nearest Texas Corp., acreage. The well is reported to have been abandoned at 1,350 meters and the rig moved to a new location near Galleguos, near Punta Norte on the Atlantic Coast of Argentina.

European Oil Demand

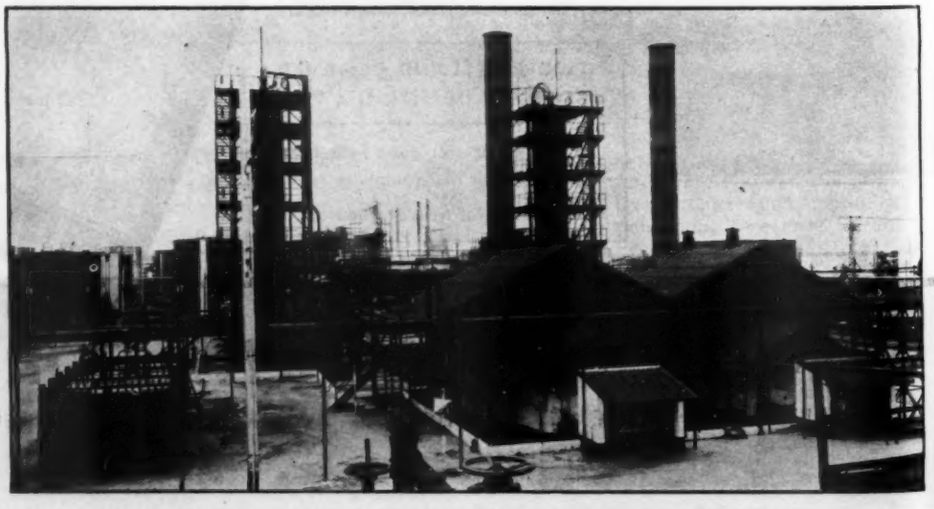
The "Petroleum Press Bureau" of London estimates that the consumption of petroleum products in Europe for the first six months of 1937 exceeded that for the same period of 1936 by approximately 10 per cent. The striking increase of 44.5 per cent in imports was recorded by Italy, the largest percentage gain recorded by any of the European nations. In volume, Italian imports increased to 1,311,400 tons in the first half of 1937, against 907,700 tons in the first half of 1936. Imports by countries are shown in the following table (figures in tons):

	First 6 months 1937	First 6 months 1936
Great Britain	5,626,100	5,221,500
France	3,863,300	3,513,700
Germany	1,841,000	1,774,100
Italy	1,311,400	907,700
Holland	702,600	624,900
Sweden	525,500	474,800
Belgium	362,000	357,200
Denmark	358,700	357,800
Norway	280,700	204,800
Czechoslovakia	209,800	190,500
Irish Free State	129,400	109,100
Austria	116,700	167,200
Switzerland	114,600	106,300
Finland	90,200	74,600
Total	15,532,000	14,084,000

Increasing European imports are attributed mainly to economic recovery, although in some instances national defense activities have played a part. Of the total imports for the first six months of 1937, crude oil accounted for 5,371,400 tons, or approximately 34 per cent.

German Crude Oil Output

The production of crude oil in Germany in May totaled 247,100 bbls., according to "International Petroleum Trade," published by the U. S. Department of Commerce. This was a decrease of approximately eight-tenths of 1 per cent compared with April but a gain of 1 per cent over the output for May, 1936. Hanover contributed approximately 91.3 per cent of the total May, 1937, production and in Hanover about 82.8 per cent came from the Nienhagen-Haenigsen-Obershagen district.



Naphtha rerun pipe stills at N.K.P.M. Palembang, N.E.I, refinery

ENGINEERING AND OPERATING SECTION

Presenting modern developments in operation of producing properties, refineries and gasoline plants, and pipe lines, including petroleum research in the field and laboratory

This Week

PRACTICAL METHODS USED TO PREVENT CORROSION FROM MID-CONTINENT CRUDE — By Robert E. Puckett ..... **Page 44**

The problem of refining a corrosive crude oil was successfully solved by Barnsdall Refining Corp. at its Wichita, Kans., refinery through use of gaseous ammonia, scrubbing the crude with water and then electrically dehydrating, and by dosing with lime. Steps taken to achieve these results and observations made on corrosion prevention are described.

SOLVENT EXTRACTION PRINCIPLES AS APPLIED TO CONTINUOUS COUNTERCURRENT OPERATION—By John W. Poole ..... **Page 50**

Although the use of selective solvents in refining and dewaxing lubricating oil stocks has been applied commercially at many refineries within the past five years, much research work remains to be done to be sure that the greatest benefits are being realized. The author offers some of his experience in dealing with a continuous and countercurrent procedure.

CAREFULLY PLANNED BOILER PLANT FEATURE OF CALIFORNIA PORTABLE DRILLING RIG — By T. P. Sanders ..... **Page 53**

Superheated steam, automatic draft control, jets in the stack and radiant reflected heads on the gas burners have all contributed toward making a newly developed portable drilling rig an unusually efficient unit. The results when the equipment was used to drill a California well are outlined here.

INSTALL SECTION OF GASOLINE LINE WHILE UNDER HIGH PRESSURE—By D. L. Hines ..... **Page 57**

A new method of installing a section of pipe line while it is under pressure is described. Only four hours were required to make the installation, and work was completed without flushing the line.

PREPARATION OF FLOODING WATER TO PREVENT PLUGGING OIL SAND—By Harry M. Ryder ..... **Page 60**

In water flooding depleted oil formations care must be exercised to prevent plugging the oil sand with foreign materials. Water treating practices used by operators in the Bradford field are described and how various suspended materials are removed.

ILLUSTRATED OPERATING IDEAS ..... **Page 65**

Improvised pipe cleaner proves highly efficient. Rod- and tubing-hoist mounted on reclaimed truck. Anchoring tractors while servicing wells. Bottom-hole pump cable spooled by treadmill.

PROBLEMS FROM READERS—By L. G. E. Bignell **Page 66**

Use of natural gas for burning brick and cement. Tenders for foreign shipments of oil. Design of gasoline pipe lines. Measurement of sand permeability.

QUESTIONS ON TECHNOLOGY — By C. K. Francis, Ph. D. ..... **Page 69**

Distinguishing properties of fullers earth production and marketing. Relation of barrels of crude oil to metric tons. Cracking and composition of olefins. No standard burner for gas ranges—orifice formula.

Practical Methods Used to Corrosion From Mid-Conti

By ROBERT E. PUCKETT
Barnsdall Refining Corp.

Within recent years the Kansas refiner of petroleum products has been brought face to face with the problem of handling a crude charge which is far more corrosive than any oil he has experienced in the past. At least in a few instances the corrosive action of the crude oil was so severe that the problem had to be solved immediately or operations suspended. Unfortunately, the refiner was given no warning of an impending run of severely corrosive charging stock. Frequently it was not discovered that the crude oil had gone suddenly corrosive until after costly damage had been done. Invariably the plant laboratory staff was called upon to suggest a remedy and to do so immediately. Under such conditions the chemist was forced to take a pot shot at the problem without the benefit of a scientific investigation which if made at all was more in the nature of a post mortem.

In the Wichita plant of the Barnsdall Refining Corp. no serious corrosive troubles were experienced until October, 1935. Two pipe stills and four Dubbs cracking units had been running for approximately eight years without any indication of unusual deterioration of equipment. Within a period of 60 days the pipe still began leaking around the rivets in the bubble tower—some tray decks were nearly destroyed. Bubble caps became clogged. The water from the draw-off separator in the lines to the tanks was saturated with iron salts. The indications were that the bubble tower would not last another three months. Immediately following these signs of disintegration the cracking plant began losing tubes with unusual frequency. Corrosion within the reaction chambers speeded up at an alarming rate. The situation demanded a quick solution to the problem.

Salt Content

The principal chemical characteristic was an acid crude charge having a salt content of 55 pounds of sodium chloride, six pounds magnesium chloride and 26 pounds of calcium chloride per 1,000 bbls. Water taken from the separator on the sour gasoline was saturated with iron chloride. Evaporation of the water gave a heavy precipitate of the iron salt.

Ammonia gas was introduced into the fractionating tower at the kerosene pan. This arrangement did not appear to be giving all the results desired. Ammonia was then injected into the cold crude-oil charging pump. Injection of ammonia at this point was contrary to the recommendations of the ammonia manufacturers who state that the gas is decomposed at around 800° F. Following the injection of ammonia into the crude charging pump an immediate improvement was noticed on the crude still. The draw-off water ceased running a stream of dissolved iron. The fractionating tower which had undergone recent repairs showed no further leaks or evidence of corrosion. Leaks in the crude oil heat exchanger became noticeably infrequent. The same result was experienced on the furnace tubes. An unexpected result took place by feeding the ammonia directly through the crude furnaces. Amino compounds of high boiling range were formed which gave an alkaline characteristic to the topped crude.

When this fuel was rerun in the Dubbs cracking still the amino compounds afforded almost complete corrosion prevention. The cracked pressure distillate was definitely alkaline. Even the coke from these units was alkaline and gave a positive test for ammonia by the Kjeldahl process of nitrogen determination. Replacement of tubes in the Dubbs plant dropped in the order of about 75 per cent. To accomplish these results required about 8 pounds of ammonia per 1,000 bbls. charged through the crude stills. The gas was controlled by the standard Paradee manometer type flow control. In order that uniform ammonia pressure be maintained the ammonia tanks were immersed in a water bath.

W.P.R.A. — Presented Before Regional Meeting at Wichita, Kans., September 21, 1937

The results achieved with ammonia injected into the crude furnace can be duplicated providing similar circumstances prevail. In the crude furnace the maximum temperature was not over 750° F. The tubes were carbon steel, 3½-inch I.D. and 4-inch O.D. The pressure within the tubes was only a few pounds over atmospheric. The velocity of flow was 3½ feet per second. The refractionating tower was constructed of riveted one-half inch steel plate with a maximum of 750° F. temperature at the base and 320° F. at the top. The internal pressure was atmospheric. The condenser was cast-iron and made with the conventional radiating fins.

A heat exchanger with a counterflow of hot fuel oil and cold crude had become a constant source of trouble due to corroded tubes and consequent leaks. With ammonia saturating the incoming crude oil and the hot residual fuel as well, satisfactory protection was given this important part of the refining equipment. Owing to the fact the heat exchanger tubes were steel, we could maintain this alkaline condition without danger of damage from the alkali itself. The cracking unit, which rather unexpectedly received the benefits of ammonia injection, was using carbon steel tubes 3½-inch I.D. and 4-inch O.D. Pressure within the tubes was 200 pounds per square inch with a maximum temperature of 900° F.

Under working conditions of the same order as described reasonable protection is given by ammonia for the prevention of corrosion. We must further qualify these results by a study of the type of corrosion which the ammonia minimized. In general, corrosion causes fall into two divisions: Low temperature or electrolytic (below the boiling point of water) and high temperature corrision by direct chemical action. Within the heat exchanger, furnace, and tower of the crude still the corrosion was due to direct chemical action. According to the work of Wood, Sheely, and Trusty (Ind. & Eng. Chem. 17) 798 (1925) the following sulfur compounds are reported as active corroding agents. (Test conducted at room temperature.)

A. Mercaptan sulfur is most corrosive, forming mercaptides of iron and copper.

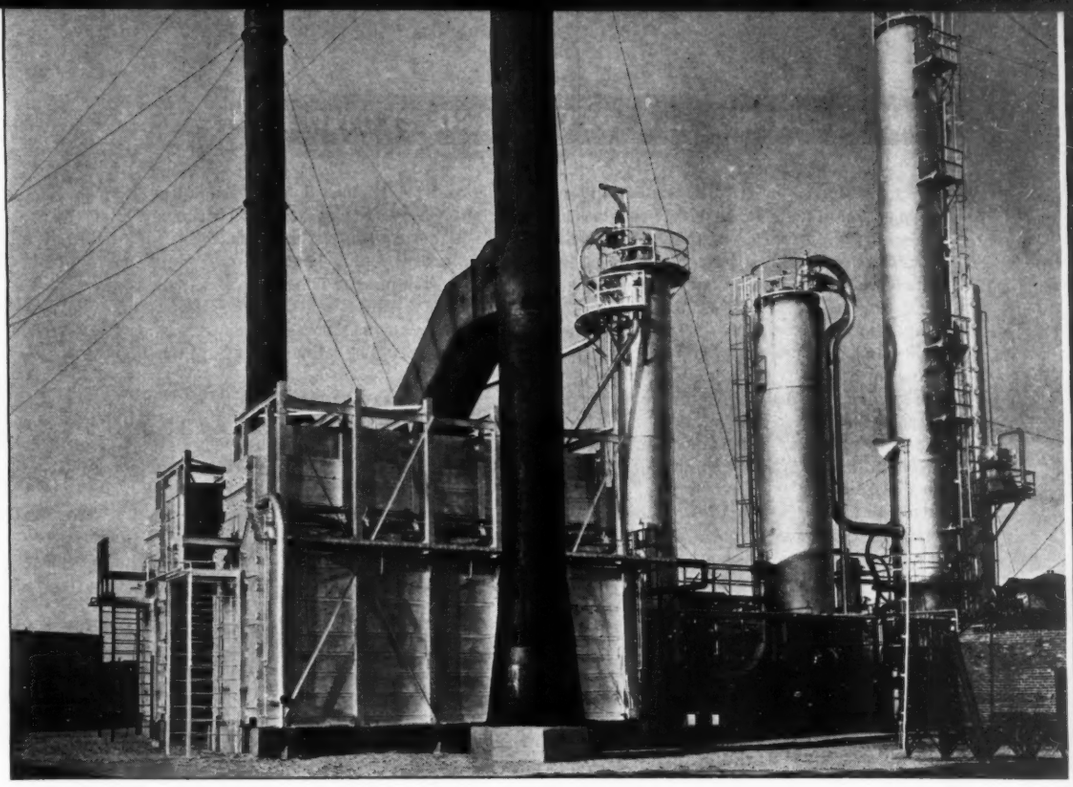
B. Hydrogen sulfide is very reactive, forming iron and copper sulfide.

C. Free sulfur is quite inactive with iron but corrodes copper and brass.

D. Other sulfur compounds are only slightly corrosive.

Lime suspension test illustrating relative particle sizes of commercial chemical limes. Sample B is superior for corrosion prevention owing to its smaller sized particles

Prevent nent Oil



Barnsdall Refining Corp.'s 2,500-bbl. two-coil cracking unit in its Wichita, Kans., refinery. Lime is injected into the furnace tubes to prevent corrosion

E. In all cases corrosion is accelerated by the presence of water.

Later work by Retailliau and Lang, Proc. A.P.I. 10, 158 (1929) records elementary sulfur as the most corrosive agent likely to be encountered at temperature around 900° F. Wilson and Bahlke (Ind. & Eng. Chem. 17), 355 (1925) believe sulfur and hydrogen sulfide to be quite active at temperatures around 700° F., and almost without action at 500° F., and below. Laboratory records did not indicate any change in sulfur content following the suddenly developed corrosion problem in our refinery. Sulfur or hydrogen sulfide corrosion without question was taking place within the still but to a negligible degree as the equipment had operated trouble-free for approximately eight years under similar conditions. Evidence at hand automatically rules out sulfur or its compounds as the sole cause of this especially reactive period.

A close inspection of the crude oil was made. Taking into account a number of analyses the crude oil contained the following adulterants: B.S. &W. one-tenth per cent total salt as sodium chloride, 50 pounds per 1,000 bbls., broken down into the actual content; calcium chloride, 20 pounds per 1,000 bbls., magnesium chloride 6 pounds per 100 bbls., iron chloride 10 pounds per 100 bbls., free hydrochloric acid 3 pounds per 1,000 bbls. Hydrogen ion concentration of the crude as determined by contact with an equal volume of distilled water was pH. 3.5.

Magnesium, calcium, and iron chlorides attack iron quite readily and as they become spent they are continually being regenerated by hydrogen sulfide. A cycle is established which will eventually destroy the equipment. Aside from the acid salts, free hydrochloric acid was present in sufficient quantities to cause considerable damage in itself.

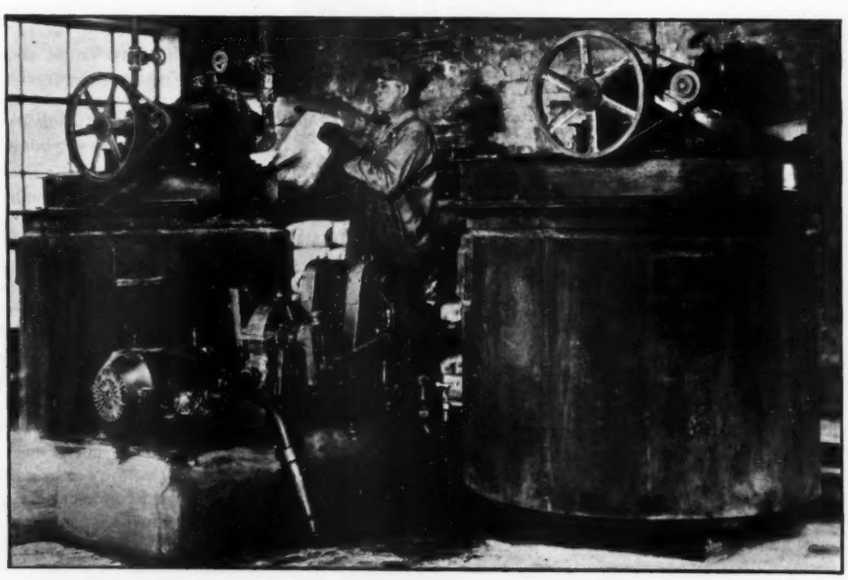
The presence of calcium and magnesium chloride in crude oil was common knowledge and their effect was understood. From the point of view of published information, iron chloride and free hydrochloric acid is an original contribution as its presence evidently was not generally suspected. Later work in our laboratory revealed hydrochloric acid and the pH of crude oil to be factors which could be measured quite readily. The acidity of crudes from different sources vary as to their free acid content. We have analyzed Kansas crude which ran from a trace to 7 pounds of hydrochloric acid per 1,000 bbls.

Judging from published information, the corrosion in our crude-distilling equipment would be caused by sulfur or its compounds in the high temperature regions and acid and its salts in the condensing section. Contrary to this idea, we believe that hydrochloric acid and acid salts are responsible for the extremely active corrosion we experienced in regions of the still which were as hot as 750° F. This concept may have to be modified when further research work is accomplished. At present we assume that sulfur corrosion had been going on continually at a rate well within reasonable tolerance. To free hydrochloric acid and its salt we have assigned the major responsibility of the unusually active corrosion. Laboratory analyses of the end products of corrosion in the high temperature sections of the crude still invariably disclosed iron sulfide, iron chloride, free hydrochloric acid, and occasionally calcium and magnesium salts, which further substantiates our opinion that acid corrosion in the high temperature sections is at least occasionally more destructive than sulfur or its compounds. Many authorities feel that hydrochloric acid corrosion will take place only in low temperature sections, basing their opinion on the fact hydrochloric acid does not dissociate so readily at high temperatures. Free hydrochloric acid must dissociate in order to become an active corrosion factor. Increase in temperature reduces the dissociation but we find the difference in dissociation between temperatures ranging from 65° F. to 700° F. amounts to only a reduction of approximately 30 per cent (Electro chemistry, Creighton and Fink, Vol. 1, page 106.) There is also a possibility of acid and acid salts setting up an oxidation reduction cell between the still wall and sulfur compounds which pass over the surface.

With sulfur corrosion the end product is iron sulfide which precipitates to form a protective coating. Free dilute hydrochloric acid dissolves this protective coat with the elimination of hydrogen sulfide gas and the formation of iron chloride which is an active electrolyte. Ammonia gas will greatly reduce sulfur corrosion and in addition render still tubes and refractionating towers alkaline. In this condition hydrochloric acid is not permitted to dissolve the natural sulfide protective film.

Ammonia is an extremely valuable asset in the prevention of corrosion in equipment which is operated with low velocity flow and under low pressure. The only handicap experienced in our refinery has been that under alkaline conditions iron chloride reacts with hydrogen sulfide to deposit iron sulfide in the refractionating tower with consequent stoppage of bubble caps and the small tubes in heat exchangers. This condition is peculiar to crude oils bearing iron salts.

In regard to our particular condition the refractionating tower has been an accumulation point for the end products of a dissolving pipe line which was being attacked by hydrochloric acid. Our observation has been that acid bearing crude should be neutralized in the field and thereby prevent its



Lime slurry tanks and proportioning pump used for lime injection

contamination by iron salts. Significant with our observation of a suddenly developed corrosive condition in the refinery was the fact that this situation developed shortly after the oil field from which we were pumping had been acidized.

In regard to the use of ammonia for corrosion prevention there is always the question of what degree of alkalinity is necessary for the best control. Some authorities recommend controlling the dosage to where the drawoff water from the condenser traps show a pH. of 6.7 or quite close to the neutral point. In view of our experience we believe a pH. of 9, which is about the akalinity required to turn phenolphthalein red, is most desirable. The factor limiting the use of ammonia gas for neutralizing sulfur corrosive compounds is the comparative low heat of formation of the sulfide.

It is our opinion that an excess of ammonia will counteract this weak point by the law of mass action. That is, where ammonium sulfide might decompose and release hydrogen sulfide the mere numerical presence of a number of free ammonia radicals would inhibit the disintegration. Manufacturers of condensers made of copper and zinc alloys recommend that ammonia be fed into the system only to the point of neutralization. However, where the construction materials will permit we believe more complete inhibiting of disintegration is had with a liberal excess of ammonia.

Salt Removal System

During August, 1936, a system was installed in our refinery to remove salt from the crude oil. The process was, briefly, to scrub the crude oil with approximately 20 per cent by volume of water and precipitate the water by passing the emulsion through a high-tension electric field. Demulsification by this system is based on the electrical theory of emulsions; namely, that an emulsion is permanent when like charges prevail on the surface of all particles. By neutralizing the particle charge the minute globules of water coalesce and precipitate. The theory is surprisingly simple and works very nicely in practical operation.

Three full-size commercial precipitators were used in our experimental attempts to desalt crude. Each unit was capable of processing 1,500 bbls. of crude oil per day. The equipment under correct operating conditions can easily scrub crude oil containing 100 pounds of salt per 1,000 bbls., and deliver a pipe line specification crude oil with 5 pounds or less of salt. It is not consistent to estimate the equipment on a percentage basis of salt removal. Our experimental evidence led to the conclusion that if 200-pounds salt crude or 10-pound salt crude was charged to the equipment, it would consistently deliver a four- or five-pound per 1,000 bbls. product. Besides the removal of corrosive salts hydrochloric acid was reduced in some cases from six pounds per 1,000 bbls. to a mere trace.

An experiment on a 30-pound per 1,000-bbls. salt content crude oil was made to find the physical form in which the salt was present. This experiment was suggested by the fact the salt content of crude oil is sometimes more concentrated than can be accounted for by assuming the traces of water present as being saturated. In the sample of crude oil in question, one-half of the corrosive salts were in solution and the other half suspended in the oil as micro particles which cannot be precipitated by centrifugal force. A crude oil of this type could be settled 100 per cent free of corrosive salt water yet retain a substantial quantity of corrosive material. The electrical precipitator was capable of scrubbing suspended micro crystals from the oil. The removal of salt in the crystalline form is the most difficult factor to handle, requiring a close grain emulsion scrub for complete removal.

In view of experimental evidence gained from a six-months' operating period, it seems quite safe to conclude that the electrical precipitation of salt from crude oils is one of the simplest and most effective ways of removing a corrosive factor. In the higher concentrations it removes compounds which physically plug heat exchangers and refractionating equipment. The removal of salt from crude oil accomplishes the dual purpose of providing a less corrosive crude charging stock and a far more desirable fuel oil for cracking purposes.

Prevention of Corrosion

The prevention of corrosion in distilling equipment appears to be an elusive problem and requires constant vigil to effect complete control. Methods which have been accepted as satisfactory sometimes fail without any obvious reason. Of course, the mysterious shifting of points of most severe corrosion is merely a change in the chemical equations involved; for example, a slight variation of temperature, pressure, moisture content, or velocity of flow will completely change the corrosion picture. The shifting percentage of salt contamination and within the total salts, constant changing of composition also contribute to cause unexpected outbreaks of corrosion. With all of these factors as shifting hazards it is little wonder that occasionally corrosion slips into the most technically policed refineries.

Following our successful corrosion inhibiting in the crude stills and the cracking units with ammonia we believed we know all the answers, at least for our own plant. However, a new 2,500-bbl., two-coil Dubbs cracking plant was constructed in August, 1936, which would operate at higher temperatures, velocities, and pressures than the obsolete 500-bbl. units that were dismantled. An entirely new set of conditions was presented for protection. This new unit operated four months without any evidence of corrosion above the limits of reasonable tolerance. December 9, 1936, a run was started on this unit. The furnace tubes were all in good condition and apparently the ammonium present as amino compounds in the topped crude was taking care of the corrosive elements present. You will recall that the amino compounds are formed in the crude still by injection of ammonia gas into the crude oil as it enters the furnace.

Exactly 16 days after this run was started the still began leaking badly at the return bends in the furnace. The equipment was shut down and an inspection made. While the still tubes were being unheaded we were surprised to have one of them drop off when the wrenches were applied. Tubes that were originally five-sixteenths inch thick were found to be about the thickness of sheet tin. Briefly, within a period of 16 days and without any visible warning the entire top bank of still was disintegrated. Thirty-two tubes were removed for replacement.

This cracking still divides the charging stock into a light and a heavy oil which is run through separate furnaces. The corrosion took place in the heavy-oil furnace and in the convection bank. The oil temperature in this region increases from 725° to 825° F. The region ranging from 825° F. to 925° F. was not corroded. The pressure within the heavy-oil furnace is usually between 460 and 480 pounds per square inch. Two types of alloy metal are encountered in the furnace. The colder regions are carbon steel and the hotter section carbon molybdenum. The colder section and hotter section both are designed to employ 2⅜-inch I.D. tubes with five-sixteenths inch wall, while the regions of intermediate temperature use 2⅛-inch and one-quarter inch wall.

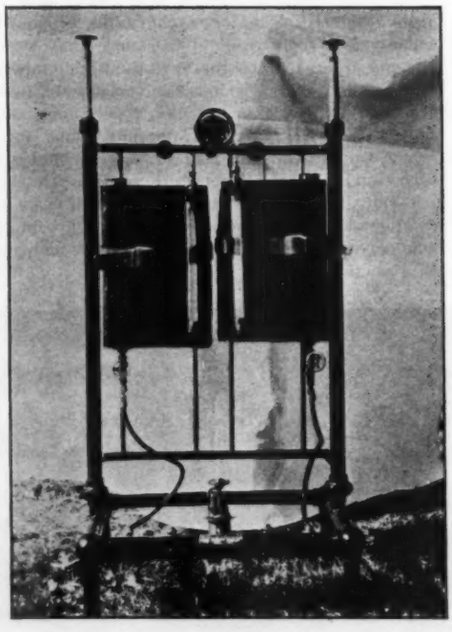
Furnace Design

In this particular design of furnace we have a unique comparison between the relative value of carbon steel and carbon molybdenum steel. With equal pipe size and despite a temperature handicap of 200° F. the carbon molybdenum steel withstood the corrosive condition in which the carbon steel failed. The factor of turbulence within the tubes was equal—a point which will be discussed shortly. However, we do find that in the smaller diameter carbon molybdenum tubing we have had some failure, but not quite so severely as with the plain carbon steel which was one-quarter inch in diameter.

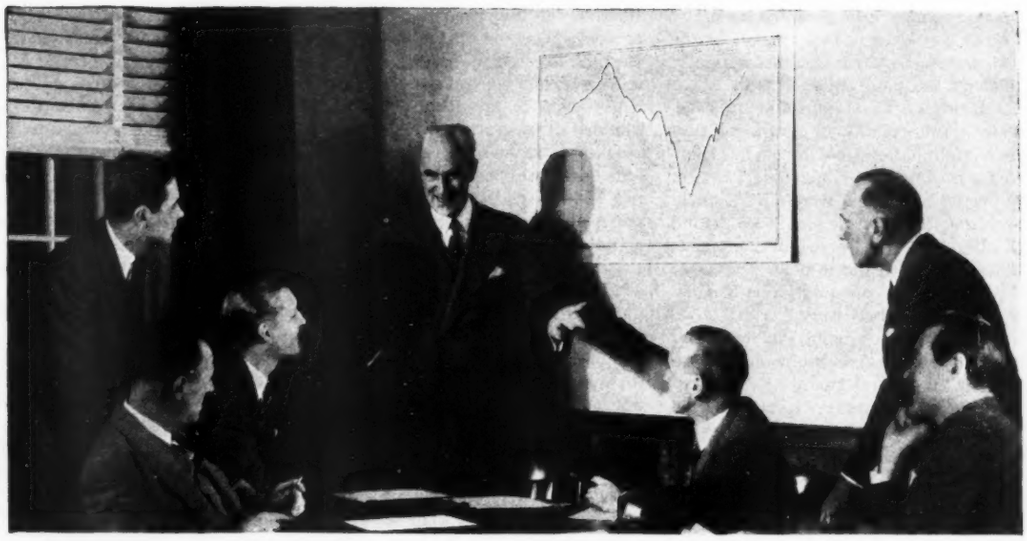
In terms of velocity flow we had severe corrosion in carbon steel with a velocity flow of 6.8 feet per second and practically no corrosion with the same velocity when carbon molybdenum steel is used. However, when the velocity of flow is increased to 7.73 feet per second in the carbon molybdenum alloy tubing it is destroyed approximately as quickly as the carbon steel with a flow velocity of 6.8 feet per second. This comparison shows a decided advantage in favor of the use of carbon molybdenum tubes.

While the extremely active corrosion was taking place in the heavy-oil furnace, no deterioration was found in the tubes of the light-oil furnace which operated at almost two times higher pressure, approximately 705 pounds per square inch against 470 pounds per square inch. The inlet and outlet temperatures were approximately identical with the heavy oil furnace. The heavy oil furnace has a maximum velocity of 16.7 feet per second and the light oil furnace a velocity of 7.5 feet per second.

Judging from a chemical analysis of the end products of the corrosion we were experiencing sulfur corrosion. In our case the principal controlling factor determining the point of attack was the velocity of flow. The furnace construction is such that we have a straight 30-foot flow and then a return bend. Due to the reverse of flow, turbulence of a high order was set up which physically washed away the normal sulfide films that pro-



Motor fuel proportioning mechanism used by Western Petroleum Refiners Association and Natural Gasoline Association of America in their joint research project of determining vapor-locking tendencies of 1937 model cars. The fuel containers are lowered or raised by means of the wheel to keep the hydrostatic heads of the containers equal. Each can is provided with a sight guage, and check valves are placed in the fuel lines leading to the proportioning valve to keep fuels from one container being forced up into the other.



"And Remember, **BOOSTING FILTER-HOUSE CAPACITY 66⅔% . . . IS ONLY ONE OF THE THINGS POROCEL IS DOING FOR US!**

Our oils show an improved V. I., carbon residue, stability and cast—ever since we replaced fuller's earth with Porocel."

* * *

- And even that is only half the story.
- It is a curious fact that while tremendous strides have been taken in practically every other branch of petroleum refining technology, the practice of filtration has made comparatively little progress.
- But now, with the established perfection of Porocel, the way is open for any refiner using percolation filtration, to reduce all filtering charges with demonstrable pick-up in the quality of his oils.

* * *

- Upon request, one of our own Technical Staff will demonstrate the advantages of using Porocel in your Refinery. Write us for particulars and samples.

Porocel Division

L. SONNEBORN SONS, INC.

88 Lexington Avenue • New York City

tect the metal from sulfur corrosion. The most severe corrosion extended approximately 2 feet in the flow direction from the tube return bends.

We feel quite confident that corrosion in the case described was due to direct chemical action of sulfur. In closing the plant down, steam is cut through the still tubes before removal of the headers. This destroyed practically all of the chemical evidence which might have been valuable in assigning the blame for the unusually rapid deterioration. About all that could be learned from our chemical inspection was that iron sulfide was present and the thin coke film over the corroded tubes gave reactions indicating hydrochloric acid. Owing to the steam flushing prior to opening the still, salts, if present at all, were washed away.

An explanation for the complete disintegration of the convection bank in our heavy-oil furnace in the short period of 16 days has never been satisfactorily explained. The corrosion was due to sulfur but the unknown accelerator of this reaction has not been discovered. We do know that free hydrochloric acid was not present, that the salt content of the charge calculated as sodium chloride was 11 pounds per 1,000 bbls. The percentage of sulfur present in the topped crude was in the usual normal range of one-half per cent.

Salt Contents Checked

During this critical 16-day period of operation the salt content of our crude oil was checked two times each day. This gave us a means of estimating the daily salt content of the topped crude being run by the cracking unit. There is very little chance of a high magnesium chloride bearing topped crude slipping by our daily salt analysis which might account for the corrosion.

In our opinion none of the known factors accounting for corrosion fit our particular condition. We have formed a rather vague idea of the cause of the trouble being an accelerated sulfur corrosion due to traces of acid salt or perhaps a cyclic sulfur corrosion due to unknown factors. Although an explanation of the cause of our corrosion was an intensely interesting problem, the most important factor was to prevent the recurrence of the corrosion. Several refiners in the vicinity of Wichita very generously shared their experiences and information in an effort to assist us in our problem. The consensus of opinion was that approximately one-quarter pound of anhydrous lime per barrel of throughput would control our corrosion.

Lime slurry tanks were set up with rotating paddles to maintain an even suspension. Proportioning pumps were installed to feed lime into the heavy-oil and light-oil furnaces. Nearly all commercial chemical lime from the point of view of purity is satisfactory. However, we are attempting to control a corrosive condition by the addition of an anhydrous chemical whose efficiency is in direct proportion to the amount of surface exposed for chemical action. Limes differ radically in particle size, i.e., available reactive surface per pound. Manufacturers of lime working from the same geological deposit do not necessarily produce lime of equal particle size. We have found it convenient to select our lime by comparing the settling time of the various brands. This was done by suspending equal weights of lime in sample bottles containing a heavy distillate. This method is an easy visual way of judging particle size. Our experience has been that among the dozen or more limes tested two brands are distinctly superior.

A common question among the refineries using lime in their high-pressure stills is: When do we have sufficient dosage? Of course the answer is: When the corrosive condition is stopped. Only actual experience can prove the presence of sufficient lime dosage. However, we have a system of dosage control which has proved of considerable value.

For each individual high-pressure still the hydrogen sulfide content of the still gases will vary relatively in the proportion as the corrosive sulfur content. Working on the basis of this assumption we measure the hydrogen sulfide content of the still gases and control our lime dosage to hold the sulfide gas to an arbitrary standard. After 10 months of operation without corrosion in our cracking still we believe a hydrogen sulfide content in the still gases of 0.2 pounds per 1,000 cubic feet is our permissible tolerance.

In order to develop an arbitrary standard where experience has not proved its worth we suggest that the sulfide content of the still gases be measured during different lime dosages and a curve plotted. Our experience has been that the curve reaches a high point and then flattens out. We assume that beyond this point the lime is of no further benefit. Our present lime dosage to maintain our tolerance of 0.2 pounds hydrogen sulfide per 1,000 feet of still gas is 0.32 pounds of anhydrous lime per barrel.

We have found that the lime dosage controlled to a definite hydrogen sulfide tolerance has given excellent protection. The same charging stock which nearly destroyed the heavy oil furnace in a 16-day period has been run through the equipment for 10 months with a tube-wall loss in the order of two-sixty-fourths inch. This protection has been given to the following alloy furnace tubes: Carbon steel, carbon molybdenum steel, 2 per cent chrome and one-half per cent molybdenum, Timken Silmo and D.M. tubes. This assortment of furnace tubes was put into service in January, 1937, at a time when it was impossible to secure full delivery on the types of tubes desired.

Summary

1. We have found the use of ammonia gas of great assistance in the control of sulfur and acid corrosion in crude stills and in low-velocity cracking stills.

2. Corrosive salts in crude oil may be removed conveniently by water scrubbing followed by electrical dehydration.

3. A controlled lime dosage has given excellent protection from corrosion in high-pressure cracking equipment.

As a matter of record, the analytical procedures used in our laboratory will be described in brief. We make no claim as to the suitability of these tests for other than practical control work.

Barnsdall Method of Analysis

Reagents: Silver nitrate, 1 cc. equals 1 milgram salt.
Potassium chromate, 10 per cent (indicator).
Bromthymol blue—Hellige.
N/50 sodium hydroxide.
C.P. benzol.

Procedure: 200 cc. oil to be tested.
200 cc. boiling distilled water.
100 cc. C.P. benzol.

Shake in a 1-liter separatory funnel for 10 minutes. Mixing with an electric laboratory mixer is preferable.

Place the oil emulsion in separatory tubes and shake out on the centrifuge. A small separatory funnel is convenient for dividing the oil from the distilled water which has been thrown down. Occasionally extra heat may be necessary to assist the centrifuge in breaking the emulsion. Titrate 50 cc. of the separated water with $AgNO_3$ (1 cc. equals 1 milgram salt), using potassium chromate as indicator (1 cc.). Number of cc.'s $AgNO_3$ less blank times 7 equals pounds NaCl per 1,000 bbls. *Caution:* Cool the water to room temperature before titrating. For HCl content titrate to exact neutral with bromthymol blue indicator. A Hellige simplex comparator outfit is very convenient for locating exact neutrality. Use bromthymol blue scale and titrate to exactly 7 pH. A 1 cc. pipette graduated to 1/100 cc. is used for measuring the quantity of N/50 caustic necessary. Number cc. N/50 NaOH times 5.11 equals pounds HCl per 1,000 bbls. Hydrogen ion concentration is measured on the extract water and recorded as pH of crude. Hot boiling water must be used for the crude extraction to prevent solution of hydrogen sulfide.

When everything is set up a complete analysis may be made in one hour. If it is desirable to separate the salts into their respective compounds, double the volumes in the original extraction.

Testing Procedure

Two hundred ml. of the extract is placed in a 400 bl. beaker, to which is added 10 ml. of 30 per cent acetic acid and 1 gram of ammonium chloride. Bring to a boil, add 15 ml. of saturated oxalic acid solution, let stand for five minutes and add a slight excess of ammonium. After four hours filter into a weighed Gooch crucible and blast for one hour, cool in a desiccator and weigh as calcium oxide. Convert this weight to calcium chloride and calculate to pounds per 1,000 bbls.

The filtrate from the calcium determination is made slightly acid, add an excess of 10 per cent disodium phosphate solution, stir constantly while adding, allow the solution to stand for five minutes and then add concentrated ammonium hydroxide in the proportion of one volume to two volumes of the filtrate. After standing three hours or more the precipitate is filtered out on a weighed Gooch crucible, blasted for one hour, cooled in the desiccator and weighed as $Mg_2P_2O_7$, which is then converted to magnesium chloride and calculated as pounds per 1,000 bbls. of crude oil.

Determination of hydrogen sulfide in still gas may be made quite rapidly in the Tutweiler gas analysis apparatus, which works on the principle of the oxidation of hydrogen sulfide gas by a standardized iodine solution. This analysis may be made in approximately five minutes. Although the accuracy is not suitable for exact work it will suffice for plant control of a hydrogen sulfide tolerance in still gases. We prefer to calculate the results as pounds per 1,000 cubic feet of gas.

Symposium Lubricants

The papers and discussion comprising the Symposium on Lubricants (1937) summarize and bring up to date available information on motor oils and their applications. The symposium is limited to motor car engine lubricants. The first paper discusses "Engine Deposits—Causes and Effects" covering such subjects as combustion chamber deposits, valves, ring clogging and crankcase deposits. The paper on "Automotive Bearings—Effect of Design and Composition on Lubricants" covers lubricating system design, equipment for testing bearings, design factors and composition of bearing material.

Topics discussed in the paper on "Addition Agents for Motor Oils" include oiliness agents, pour inhibitors, viscosity index improvers, anti-oxidants, and carbon removers. "How to Select a Motor Oil from the Standpoint of the Consumer" is covered in the fourth paper which points out factors concerning oil viscosity, rate of replenishment, mechanical failure and contamination.

The symposium was developed by Technical Committee B. on Motor Oils of A.S.T.M. Committee D-2 on Petroleum Products and Lubricants and is a sequel to a similar one held in New York City in 1933. Widespread interest in the subject is evidenced by the considerable discussion which is included in the publication. Copies of this publication, 89 pages, can be obtained from A.S.T.M. headquarters, 260 S. Broad St., Philadelphia, Pa.

Gladly Acknowledged

Badger engineers recognize that much of the success of their oil refining plants and units is due to the cooperation given by the clients' engineering and operating staffs. Their experience and knowledge are invaluable, particularly when new ideas are to be carried out.

On their part, companies entering into contracts with Badger know that their suggestions and aid are most welcome. The whole project then becomes a mutual undertaking.

E. B. BADGER & SONS CO.

BOSTON • NEW YORK • SAN FRANCISCO

•

Engineers and Contractors
for Petroleum Distillation and Refinery Equipment

Solvent Extraction Principles

As Applied to Continuous Countercurrent Operation

By JOHN W. POOLE
Petroleum Chemist, New York, N. Y.

From single-stage continuous extraction, diseussed in the preceding article, development to a continuous countercurrent plant of any number of stages is easily visualized.

Basically, everything necessary is accomplished by subjecting the oil already refined in the single stage of Figure 3 to further extraction. Each extractive step is identical in mechanics with every other, including the one already exemplified.

While the basic principles remain identical in either case, actual countercurrent flow of solvent and oil is economically much superior to a condition where the oil phase flows from one stage to another; being, in each stage, extracted with fresh, unused solvent.

First, less solvent is necessary in true countercurrent extraction; second and related to the first, for any specified purity of the refined oil, the yield thereof is greater the less the total quantity of solvent used for refining. In a sense, this is broadly equivalent to the more usual statement, that "countercurrent flow allows more efficient use of solvent." However, it means more than that: It means that any conceivable means by which a raffinate of specified purity may be attained—said means reducing the quantity of solvent used—*may be expected* to increase yield. Since decreased solvent volumes mean decreased costs for recovering solvent a double benefit is thus enjoyed.

Solvent Ratio

Like most general statements concerning apparently fundamental principles of solvent extraction, the above statement should be accepted with reservation. As has been said before, solvent extraction is a new art and by "principle" is meant "so far this has been true." At present "rule of thumb" might be a better term than "principle."

On the other hand, the statement is not based solely on comparison of the results of single-batch, multiple-batch and countercurrent extractions; a comparatively recent discovery leads the writer to believe that possibly *the less solvent used to produce a raffinate of specified quality or better, the greater will be the yield* may never be found false except under certain conditions hereafter noted.

At one time the writer would have said that this statement would be more notable for exception than for verity. Certain old data for five different oils, using crotonaldehyde as solvent demonstrated how broadly the statement can continue to be factual. Taking at random one of scores of single-batch extractions, the following facts stood out:

If at a given temperature, the solvent ratio was increased, yield decreased (as would be expected), even if the inevitable improvement was slight. Conversely a decreased solvent ratio did not produce a raffinate of comparable paraffinity. Not exactly a startling discovery, but one at least possessed of some bearing, particularly in view of the following.

Change with temperature was next considered. With unchanged solvent ratio, it was found that increased temperature—causing the solvent to bite deeper into the oil—did not always improve quality but merely bit deeper largely at the expense of the desirable fractions. There was one notable exception: Paraffinicity, measured by A.P.I. gravity, did increase (in both phases) when the total dissolved material was less than about 7 per cent of the weight of the solvent phase. The smaller the percentage of dissolved matter, the greater was the improvement; and the closer in A.P.I. gravity were the respective extracts and raffinates, the greater did the paraffinicity (of both phases) increase with temperature.

Previous articles of this series on "Theories and Practices of Solvent Refining" dealt with batch and continuous single-stage extraction. The author, in the fifth of the series, now applies the basic mechanism of those operations to continuous countercurrent extraction. Other articles of the series appeared in the May 6, July 8 and July 15, and August 5 issues.

On the other side of the picture, decreasing the temperature sometimes increased the paraffinicity of the raffinate material, even when simultaneously increasing its yield. The greater the amount of dissolved material, the more positive was this joint effect. As is to be inferred from the preceding statements, the condition no longer held when the quantity of dissovled material was relatively small.

But in either case results conformed to the above "principle," provided conditions were avoided which did not lead to excessive solution of solvent in the oil phase. (What constitutes excessive solution cannot be as yet specifically defined. It seems to be between 20 and 30 per cent of the oil phase on a volume basis. Where paraffinicity of all constituents is high it would appear that the greater quantities can be dissolved and not be "excessive.")

Where increased temperature gave better raffinate qualities it was generally found that to produce the original quality, solvent ratios could be reduced to a point where the ratio of dissolved desirables to undesirables was actually lowered in spite of the greater unit concentration of dissolved "good oil." Where lowered temperature alone improved quality of raffinate, obviously less solvent could be used to obtain the original quality and the improvement in yield in such cases was particularly marked.

Further points of commercial significance derive from the above realizations. In cases where a large quantity of material (20 to 25 per cent) is dissolved in the solvent, with considerable difference in paraffinicity between dissolved and undissolved hydrocarbons, a reduction in temperature will likely lead to definite improvement in selectivity;. But where little material is dissolved and paraffinicity differences are not great, an increase in selectivity may derive from a temperature increase. Where considerable material is dissolved and paraffinicity differences are relatively minor, there arise circumstances on which the effect of temperature changes are as yet predictable and only empirical methods are of value. Such a condition may arise in the so-called "rectifying section" of a countercurrent plant. Here the quantity of dissolved material must be relatively great, but since the system at that point may be highly "naphthenic," differences in paraffinicity may actually be slight. Without doubt this condition of unpredictability has been the basis for certain differences of opinion between authorities as to the most desirable methods for "refluxing" an extraction plant. Depending on which way the 'unpredictable" chanced to fall, refluxing by means of "solvent free extract" would be either helpful or destructive.

The subject matter of the previous member of this series will often provide a valuable clue in determining the direction of approach. It would appear that where high solvent ratios exist, return

(Continued on, Page 54)

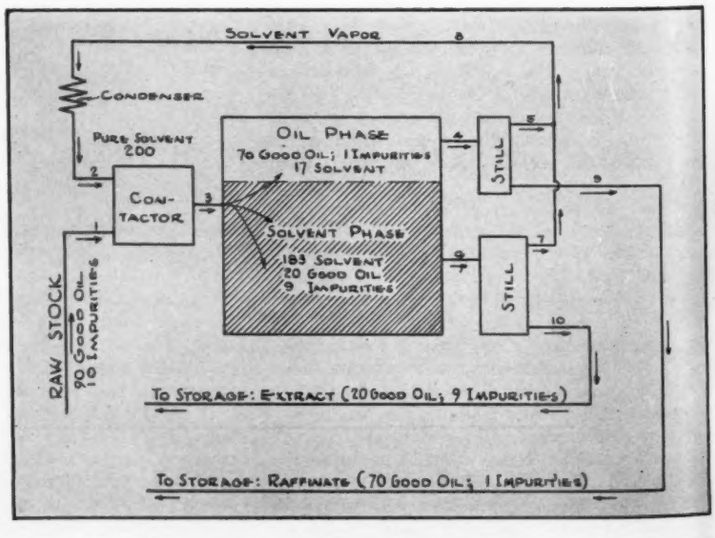


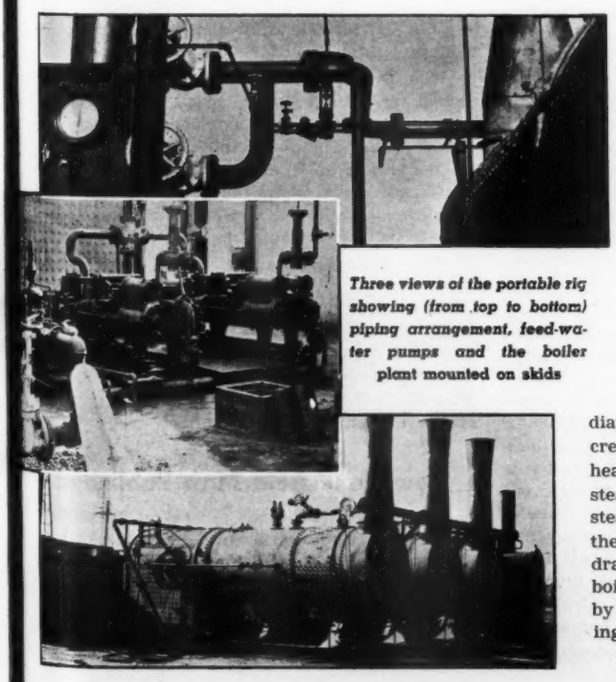
Fig. 3—Flow diagram of simplest possible continuous solvent extraction plant using single-stage extraction

Carefully Planned Boiler Plant Feature of California Portable Drilling Rig

By T. P. SANDERS

A heavy portable drilling rig used by Royalty Service Corp. in the El Segundo field of California's Los Angeles Basin is conspicuous for its carefully planned boiler plant and other up-to-date features. Operating advantages have been gained by the use of superheated steam, automatic draft control, steam jets in the boiler stacks, and radiant refractory heads on the gas burners in the boilers. With all these improvements, the portability of the rig has not been sacrificed. The boiler plant and all other parts have been designed to promote speed in moving and in assembling the units at the new location. At the present location the rig is being required to drill to a depth of approximately 7,400 feet, but it is capable of completing 10,000-foot wells.

Briefly, the boiler plant consists of three 125-hp., 300-pound working-pressure boilers augmented by a portable superheater. Superheated steam at an average temperature of 550° F. and an average pressure of 250 pounds passes through an insulated line to the drilling well; where it is consumed by two steam engines and two steam pumps. The hoist or drawworks is operated by a 12 by 12 twin-cylinder vertical engine. The rotary table is shaft-driven by a smaller vertical engine which also operates the stand-by hoist, and drilling fluid is pumped by two slush pumps.



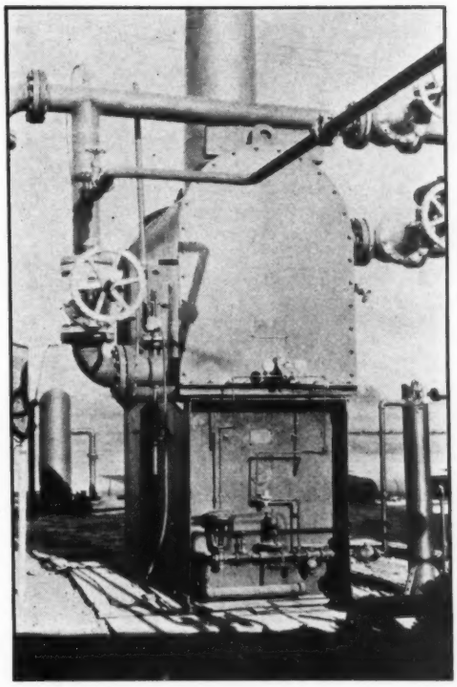
Three views of the portable rig showing (from top to bottom) piping arrangement, feed-water pumps and the boiler plant mounted on skids

The operation of the steam-generating plant is entirely automatic. When an intake valve on an engine or pump is opened, the pressure drop on the supply line not only regulates the fuel supply to the boilers, as is customary, but it also regulates the volume of air mixing with the gas, and induces a draft in the boilers by means of steam jets in the boiler stacks. These three operations take place simultaneously, and are actuated by the effect of the changing supply-line pressure on several diaphram valves. The volume of air mixing with the gas supplied to the boilers is controlled by small draft-doors which are built into the sides of the burners. These are automatically raised when the fuel supply is increased. NGE-Nelson burners are used, which are essentially steel boxes installed directly beneath the boilers with no brickwork. Around the sides of the steel boxes are the draft doors. Inside are series of individual cast-iron burners, each supporting a radiant refractory head. The refractory material prevents direct flames from impinging on the boiler metal, gives a more even heat, and causes a more gradual decrease in temperature in the boiler when the gas is turned off, so that stresses due to rapid contraction are minimized.

In order to make the boilers easier to move, very short stacks are used, and these are left in place during most moves. Inside of these stacks are steam jets which provide sufficient draft to rid the boilers of burned gases. This, of course is the same principle used on railroad locomotives, except that locomotives discharge their exhaust steam through their stacks, whereas live steam directly from the boilers is injected into these stacks.

The firing of the superheater is also accomplished by automatic means, but its regulation is by temperature control rather than by pressure control. A regulator on the discharge of this unit is, in this case, set at 550 degrees. When the temperature falls below this point, a diaphragm-operated valve opens to increase the gas supply. Thus the superheater, like the boilers, is only fired as the steam requires. In spite of the large-sized steam engines and pumps used on this rig, the steam head at the boiler plant is never drawn down appreciably, because the boilers, with their forced draft and aided by the superheater, are capable of supplying steam as fast as it is ever used.

Regulation of the gas supply to the boilers and reduction of main-line pressure is all done in one operation by one regulator. The gas is taken from a line carrying 20 pounds pressure. This is reduced to 6 pounds by the same diaphram valve which automatically regulates the supply of gas as steam is required at the rig. Another large regulator at the boiler plant automatically controls the supply of water to the boilers by regulating the steam supplied to the boiler-feed pumps. A water meter is in use to check the efficiency of the plant. Also, a meter records on one chart both the temperature and the pressure of the outgoing steam, so that trouble or irregularities are immediately indicated to the attendant.



Superheater used at the El Segundo portable rig. Near the base is seen the automatic temperature regulator

Boiler Hookup

Each boiler is mounted on steel skids with the barrels supported by steel frame work. The burners can be moved with the boilers, or they can be removed. The steam lines, water lines, and gas lines on the boilers are manifolded, but each boiler retains its own piping while it is being moved. They are separated from one another by simply unflanging the manifolded lines. Single-bolt couplings are used on many of these lines. The feed-water pumps are mounted as a single unit on skids. The regulators, piping, platforms, valves, by-passes, and other fittings remain in place on this unit during a move. At the new location the entire steam-generating plant will be set up in exactly the same position, except for the incoming gas and water lines. The chief advantage of equipment designed in this way is economy of time in reassembling the plant at the new location.

Like the boiler plant, other equipment at this location is designed for portability. Each of the vertical engines has a steel foundation or substructure. This is carried from location to location in one piece, installed on a concrete pad, and its engine is mounted on top of it. The two slush pumps, like the feed-water pumps, comprise a single unit

with platforms and piping attached. This unit is very weighty, and is mounted on a concrete pad when in use.

As an added departure from conventional operation, the individual rotary-table engine is not mounted on the derrick floor as is usually the case

Exhaust steam muffler on Royalty Service Corp's. heavy portable drilling rig

when the table is shaft-driven by an individual vertical steam engine. Instead, the engine is located behind the auxiliary hoist completely off of the derrick floor. A long shaft connects it with the rotary table, and a clutch is used for engaging the auxiliary hoist. In case of a break-down of the large steam engine, which is located on the opposite side of the derrick, the smaller engine can readily handle a complete string of drill pipe. Its power is increased by the efficient modern boiler plant.

Solvent Extraction Principles

(Continued from Page 50)

of extract per se may be desirable, but with low solvent ratios resort to direct precipitative methods must be had. Where extract concentration is not excessive, that section of an extractive plant between the points of fresh feed and solvent exit should not be greatly lowered in temperature for best results.

Better Yields in Countercurrent Flow

How the reduced quantities of solvent, required by a countercurrent plant over a procedure involving multiple extractions with fresh solvent, lead to improved yields, may be readily understood.

As have been noted in previous articles, the amount of raffinate materials dissolved by the solvent and therefore included in the extract is largely a function of solvent quantities. This appears to be essentially true until the total hydrocarbons dissolved equals around 15 per cent of the solvent phase. Thereafter greater concentration of dissolved material tends toward abnormal and excessive solution of paraffinic components. At some point not far above 20 per cent, this increased solubility is likely to prove detrimental to yields. In short, reducing the quantity of solvent used to extract to a specified paraffinicity of raffinate is highly advantageous up to concentration of 15 to 20 per cent of solute. Thereafter further increase in concentration — or decrease in solvent ratio — is likely to be destructive of yields. Possibly greater concentrations are permissible at certain intermediate points in the system, but in the writer's experience a greater concentration in the spent solvent issuing from a system is equivalent to needlessly sacrificed yield of raffinate. Optimum yield and optimum solvent ratio are more or less identical.

In light of the above statements the advantages of countercurrent operation are plain. Suppose that the oil phase from Figure 3 is to be further refined using exactly the same quantity of solvent: to wit, 200 parts. For simplicity of illustration certain very minor factors will be neglected.

Effect of Additional Solvent

Of this freshly added solvent none will be required to saturate the already saturated oil phase, and all will therefore remain in the solvent phase. Using the same phase compositions for solvent and good oil as before and the same distribution ratio of impurities between solvent and oil phase: Since approximately 22 parts of oil will dissolve in the solvent, the oil phase will comprise 48 parts of good oil and about 12 of solvent, a total of about 60 parts. The solvent phase will consist of 200 plus 5, or 205 parts of solvent and about 22 parts of "good oil," a total of 227 parts.

Calculations based on these figures and the distribution ratio of 4 show that of the impurities, only .06 parts remain in the oil phase, 0.94 parts being in the solvent phase. Considerable improvement of raffinate quality has resulted, but the yield thereof is much less. The concentration of impurities has been further reduced to .12 parts per 100, as against 1.4 parts per 100 for a single extraction, and 10 parts per 100 as originally present; but only 50.06 parts of raffinate are recovered as against the previous 71 parts, it being assumed that the solvent used in each stage has been combined and distilled to form the extract.

Assume, on the other hand, that the solvent phase of this second re-extractive step, instead of passing immediately from the system, were substituted for the pure solvent used in the single-stage extraction depicted in Figure 3. Except for an inconsiderable quantity of impurities and the presence of the same 22 parts of good oil, this slightly used solvent is exactly like the fresh solvent used in Figure 3 and in substantially the same amount. Other than for these 22 parts of good oil, we might say that the substitution involved no appreciable alteration of conditions.

Effect of Added "Good Oil"

But even this added volume of "good oil" is not productive of as grave a change as might first appear. It means little more than that the solvent has thus become presaturated with "good oil," so that none will be dissolved from the fresh incoming feed. The notable effect is then that the oil phase in the first extractive stage will comprise about 20 *additional* parts of "good oil," which merely circulates back and forth between the two stages, or in case of, say a five-stage plant, through the five stages. Since the decreased yield caused by the solution of this material in the last stage is now compensated for by an added equivalent entering that stage, the yield of good oil in the raffinate is again 70 of the original 90 parts, while the purity is about the same as prevailed when the production of finished raffinate comprised only 50 parts.

To be sure, there are several very minor items which we have neglected, all of which are somewhat unfavorable, but in the present illustration they are justly considered unimportant. By proper material balances, calculations can be made for exact end results and intermediate conditions. However, since the distribution ratio is not constant from stage to stage, and is different for every oil, every solvent, every temperature, the value of such exact calculations, when the fundamental constants involved are not exactly known, is entirely obscure. Except for the principle involved, which has been shown above, such calculations find little significance in the writer's opinion.

Also the writer is still at a loss, concerning the value of complicated graphical depictation of multiple extractions attempting to depict the treatment of an oil by a specific solvent. Admittedly they are valid for one oil and one solvent alone but, involving questionable assumptions as to what constitutes extract and what constitutes raffinate, about all they accomplish is what can be said by a few short words: At temperature "T," a solvent ratio "y" will require "x" stages to produce extracts and raffinates of specified gravities. The only true variables involved are "y" and "x," and to fix their relationship the problem must be solved in practice. This being done, the problem is solved regardless of how results are expressed. If it were possible to graphically show the relationship of temperature, solvent ratio, number of stages, extract gravity, raffinate gravity and raw oil gravity, something of real value would result. Someday we may be able to express this by an equation, but as yet no suitable means has been devised to portray more than two independently variable quantities on a flat surface, such as a sheet of graph paper.

Model Tank for Texas School

The school of petroleum engineering of the Agricultural and Mechanical College of Texas is assembling a complete faithful one-sixth scale model of a producing well for student's laboratory study and experimentation. Manufacturers and distributors of oil field equipment are supplying the college with models of their equipment.

The Drane Tank Co., distributors of Butler bolted tanks, with headquarters in Fort Worth, Tex., requested that the engineering department of the Butler Manufacturing Co. of Kansas City build a faithful one-sixth scale model of their crude oil storage tanks. Three thousand especially-made miniatures of the full size bolts and nuts were used in its construction.

The accompanying picture shows executives of the company examining the model with R. V. Sutherland, Butler's chief engineer. Left to right: R. V. Sutherland, Louis Brown, sales manager, Kansas City oil equipment division; C. C. Crouch, vice president in charge of sales promotion; E. E. Norquist, president, and Glen C. Speakman, general sales manager.

New Venezuela Map Published

The International Map Co., 90 West Street, New York City, has published a new oil concession map of eastern Venezuela showing, in distinctive colors, holdings of the six principal companies as of July 1, 1937. The map also shows drilling wells, as of that date, pipe lines, etc. Size of the map is 47 by 22 inches, on a scale of 12 miles to the inch.

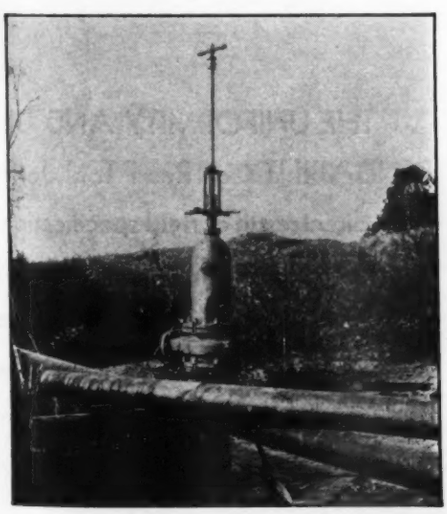
Install Section of Gasoline Line While Under High Pressure

By D. L. HINES
Pipe Line Chief Engineer, Tide Water Associated Oil Co.

A common pipe line problem was recently overcome in a newly devised manner by Tide Water Associated Oil Co. (Associated Division) on their 6-inch high-pressure line which transports natural gasoline from the Coalinga field of California to a marine terminal at Monterey. At one point on this 165-mile line, construction of a county road resulted in the removal of so much earth that the line, which had been buried to a depth of 2 feet, was left on temporary props 10 feet above ground. It immediately became necessary for the company to change this overhead crossing to an underground crossing, but this could not be accomplished simply by lowering the line into a ditch. Circumstances made it necessary to cut the line and lay a new section under the right of way.

Essential Equipment

On a long-distance gasoline line, changes which require cutting the line represent a considerable expenditure, since it is necessary to flush the line out with water in order to avoid having to waste all the gasoline in the cut section between two main-line valves, which may be 5 to 10 miles apart. Flushing at best is a procedure which requires considerable down time, and usually there are other grave disadvantages to this method. With a desire to avoid flushing in this instance, a new method was investigated. This method makes it possible to install a shut-off at any point on a line while it



Equipment used for forcing rubber plug into the line to effect a shut-off under pressure after the cutter was used to open the line inside of the welded-on fitting

is under pressure. The essential equipment includes a special fitting which is welded around the pipe, a cutting tool which opens up the line without allowing leakage, an instrument for forcing a rubber plug into the line, and an instrument for capping the opening after the plug has been removed.

The special pipe fitting is similar in appearance to the "pot strainer" or standard cross; the run of which is open, the upper outlet of the vertical opening flanged, and the lower outlet of the vertical opening bull-plugged. The fitting is in two halves, being split horizontally. It is placed over the pipe at any point where the shut-off is desired and is welded around its circumference at both ends and also longitudinally to weld the two halves of the fitting together. A high-pressure gate valve is then bolted to the flange at the top of the fitting. In the next step, the cutting tool is employed to open up the pipe inside of the special fitting.

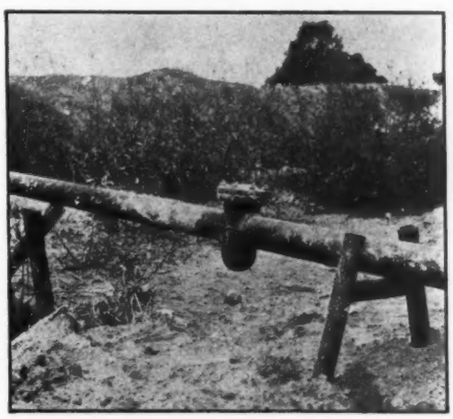
The cutting tool is bolted to the flange of the gate valve and the cutter is fed down through the pipe by means of a crank and screw. Power is furnished by an air-driven engine. There is a pilot drill in the center of the cutter, and the cutter itself is much like an ordinary milling-machine tool. It is fed downward until the pipe is cut through both top and bottom, after which it is backed up and the gate valve is closed. The entire cutting-tool assembly is then removed, and in its place the auxiliary thimble (the instrument used for forcing the rubber plug inside of the pipe) is bolted to the upper flange of the gate valve.

Inside of this thimble is a composition semi-hard rubber plug. For a 6-inch line this is 6 inches in diameter and about 10 inches long. This plug is forced downward by means of a hand crank and screw so that it passes through the pipe line and is stopped in the bull-plugged bottom of the special fitting. Pressure is added by the hand screw at the top of the thimble until a complete shut-off has been effected. The shut-off was tested on the Tide Water Associated Oil Co.'s line by installing a small hot-tapped fitting with a valve that could be opened to tell when the flow had stopped. It was found that a complete shut-off had been effected. The line was then cut, the new road-crossing section of pipe was welded in place, and the rubber plug was removed from the pipe by backing it up through the gate valve and into the thimble by means of the hand screw. This permitted closing the gate valve and removing the auxiliary thimble assembly. The line was then put in service, but in order to recover the high-pressure gate valve, a final operation was undertaken.

Final Operation

A second special thimble was bolted to the upper flange of the gate valve. Inside of this second thimble was a steel plug threaded to fit threads located inside of the flange at the top of the special fitting. With a hand screw this steel plug was screwed down into the special fitting. Both the gate valve and thimble were then removed while the line pressure was held by the steel plug. The plug was tightened to make a tight joint, and a blind flange plate was bolted to the flange of the special fitting to cover the screw plug. To complete the job the nuts and bolts on this flange were spot welded.

While this was the first time this patented equipment was ever used in actual operations of the oil industry, only four hours were required to effect a shut-off. It is contemplated that many occasions will arise on this and other pipe lines which will call for the use of this equipment. It is



Special fitting as seen after the shut-off plug was removed and line restored to service

especially acceptable on a line of the kind on which it received its first application, where filling of the line with water is objectionable, where long shutdowns are difficult to arrange, where line contents are hazardous, and where work must be carried on near highways or some other points of activity. Also, equipment of this type automatically becomes valuable in case of line failures.

Shortage of Heavy Oils

The problem of a threatened shortage in certain heavy oils was discussed at the recent World Petroleum Congress in Paris, when J. B. A. Kessler, of the Royal Dutch Petroleum Co., expressed interesting views on the subject. He referred to the change in conditions during the past few years which has resulted in a threatened shortage of certain classes of heavy oils for which previously there was no legitimate demand and for which only a low level of prices was obtainable. This situation has been brought about by factors operating on the supply side, as well as by the rapid growth of demand.

It is apparent, Mr. Kessler pointed out, that the situation requires to be met by some adjustment of the balance of refining output in the shape of a larger production of heavy oils from the crude treated. The desired result could be brought about, it is suggested, by the partial shutting down of existing cracking plants—or, at least, by changes in the method of their operation. This action would reduce the quantity of fuel oil at present being utilized for cracking purposes.

You get MORE WELLS PER STRING

WITH REED TOOL JOINTS

★ THE UNIFORMITY AND DEPENDABILITY of Reed Tool Joints is the direct result of rigid specifications in the selection of highest grade alloy steels, precision manufacturing, and scientific heat treating under complete inspection and metallurgical control at all times.

SEE THE REED EXHIBIT AT THE OIL-WORLD EXPOSITION, HOUSTON, OCT. 11-16

Wherever There Is Rotary Drilling

You dig it STRAIGHTER-FASTER AND AT LESS COST

WITH REED DK ROCK BITS

★ COMBINATION BALL THRUST AND ROLLER BEARING ASSEMBLY . . . keeps the cutters in true alignment

★ IMPROVED METALLURGY IN THE BIT CUTTERS, AND HARD SURFACING OF THE CUTTER TEETH . . . insures longer life.

REED ROLLER BIT CO.

LOS ANGELES HOUSTON OKLAHOMA CITY NEW YORK

Distributed through Supply Companies Everywhere

Mid-Continent and Gulf Coast Distributors for MARTIN-DECKER PRODUCTS

Preparation of Flooding Water to Prevent Plugging Oil Sand

By HARRY M. RYDER
Ryder Scott Co., Bradford, Pa.

Almost all of Bradford's large daily production of crude oil is driven from the sand by water. Bradford's income may therefore be said to depend directly on the water continuously entering the oil sand. This means that there must be no plugging at the sand face in the pressure wells, or in the sand body itself due to the water or any materials it may contain, if the most profitable flooding action is to take place.

All producers are therefore justified in fearing sand plugging, and in taking such means as may be necessary to avoid it. Just what constitutes a plugging condition, and what means must be used to best avoid it have not always been a clear issue. For this reason, some producers, feeling they do not know what it is all about, use no treatment for their flooding water, while others apply all the treatment suggested, often just to be sure. Of course, many producers too may be placed in an intermediate category, using filters, and perhaps other mild treatment, and let it go at that.

Making grain size permeability determination in a Bradford field sand testing laboratory

It seems desirable, therefore, at this time to discuss the various causes of plugging, and what can and should be done about them. Pure water will not plug the sand, but no absolutely pure water is available for flooding purposes. The foreign matter that water contains is therefore responsible for all plugging, but water may contain foreign matter and yet be perfectly satisfactory as a flooding medium. What then, are the foreign substances which cause trouble, and how are they to be removed or rendered safe? We shall attempt to answer these questions from the producer's viewpoint.

Water used for flooding in the Bradford area may cause trouble due to one or more of the following conditions:

1. Suspended matter (dirt) in the water.
2. Iron in the water.
3. Manganese in the water.
4. Organic matter (slime) in the water.
5. Water excessively corrosive to pipe lines.
6. Unusual materials such as excessive gypsum or other salts in the water. (Rare in Bradford.)
7. Sulfur. (Also rare.)

Let us consider these in the order named: (1) *Suspended matter.* This is the most common cause of plugging trouble, and at the same time simplest for the producer to detect and correct. To check for suspended matter a very clean bottle should be filled with the water obtained under normal conditions. If the water is taken from a tap in a pipe line, the tap should be opened a little, and allowed to flow for quite some time to allow material removed from the pipe surface by the new flow of water to be eliminated. Without changing the flow, the bottle should then be thoroughly rinsed out with this water and filled. If the water is taken from a tank, it is necessary that the water movement in and out of the tank has not been recently changed, otherwise dirt may be stirred up from the tank bottom or from the connecting pipe lines. It is also necessary that any floating dirt may be avoided.

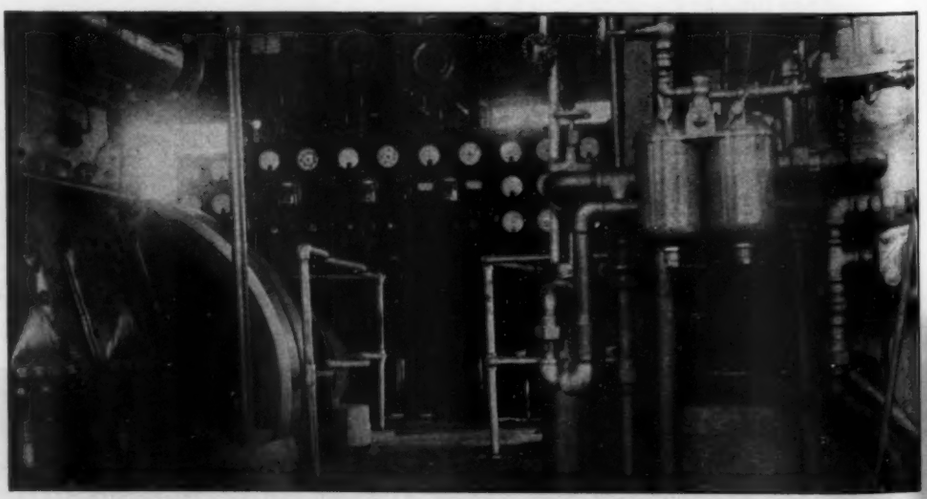
With the bottle filled in accordance with these precautions, a fair sample should be obtained. An examination of the water, both with and against the light, will reveal the presence of suspended matter. If any appreciable amount is seen, the water should be sent to the laboratory for further check. The laboratory has a series of standard samples of varying degrees of turbidity for comparison purposes.

If suspended matter is found, as it may be in well water, as well as in water from a stream, it is advisable to use a filter. Any filter of standard make and suitable size will do the work if properly installed and reasonably handled. It does not require a specially trained man for this job, but a few important points suggested by the supplier should be carefully followed.

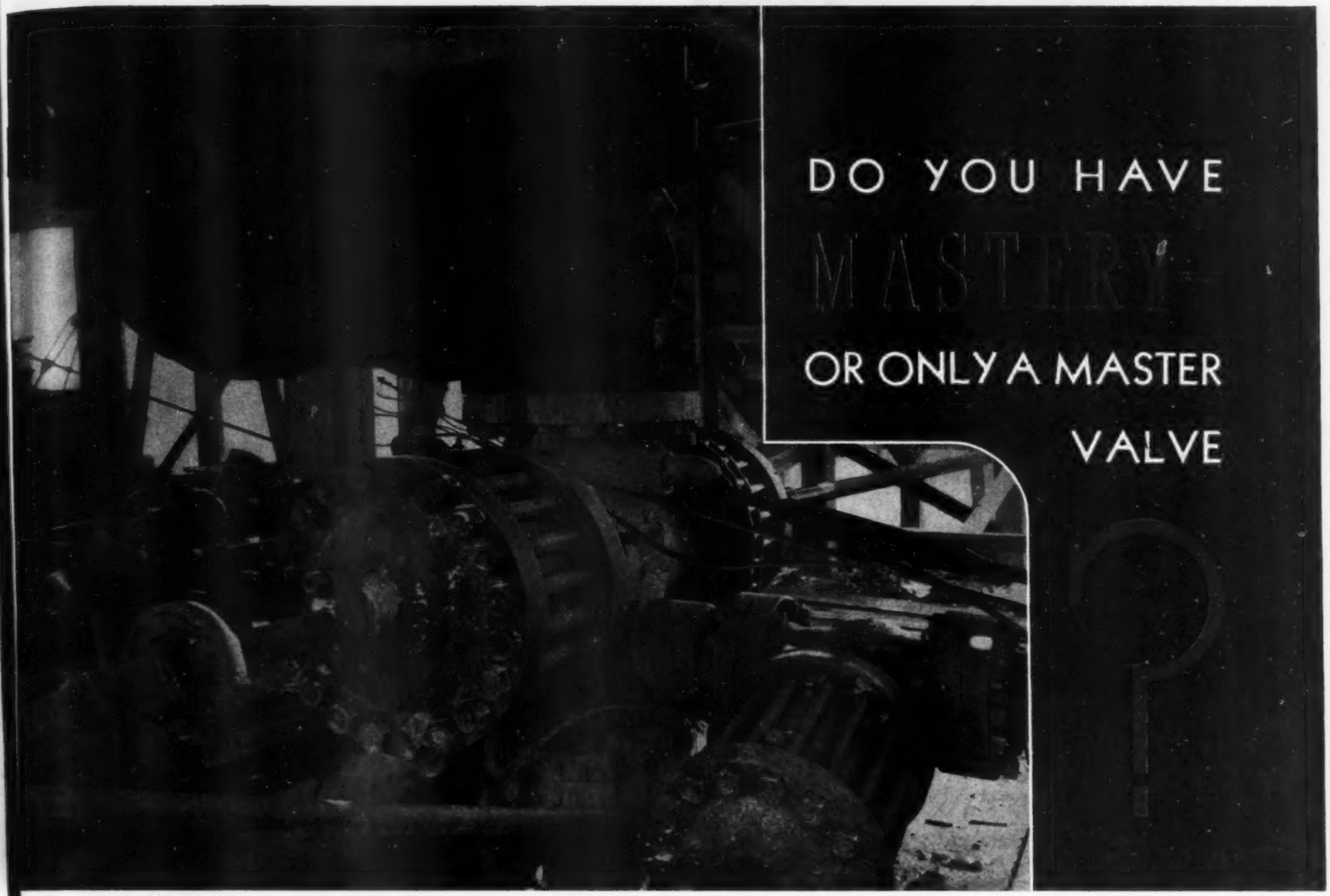
Water may, under certain conditions, contain dirt particles too fine to be removed by the filter alone, although the writer has observed very little of this in the Bradford field. In cases where it does occur, the usual treatment is to add a small amount of alum to the water before it is filtered. This alum will form a flocculent precipitate in the water, which gathers together the fine dirt particles and in passing through the filter is taken out with them.

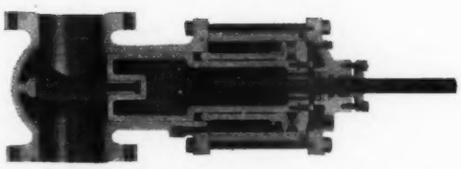
However, the formation of this floc takes time, especially in the characteristically cold water most used in Bradford. If sufficient time is not allowed for the formation of the floc before filtering, some will form after the water is filtered, and move on to the sand face in the pressure wells, where it will form an excellent plugging material. It is possible that many wells have been plugged in this manner. To prevent this, the best means is to avoid the use of alum if possible. Otherwise, it is absolutely necessary that a tank or basin be provided, between the alum treater and the filter, of sufficient size to hold at least 20 to 30 minutes' supply of the treated water. A larger capacity would be safer, but less might be very dangerous, especially if the water is cold.

2. *Iron.* An iron compound is sometimes found dissolved in the water. When the water is exposed

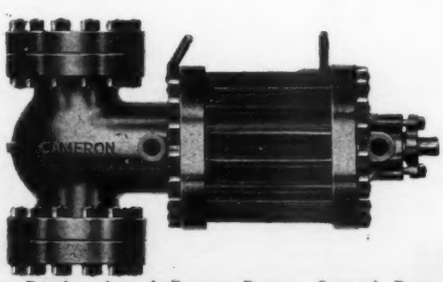


Electrical generating station on Ryder Scott Co's. lease near Bradford, Pa.





When fluid pressure is applied to closing side of ram-gate operating piston, ram-gate moves swiftly across horizontal bore and seals instantly on single seat formed integrally with self-cleaning gate cavity.



Exterior view of Cameron Pressure Operated Gate Valve. Note closing and opening ports which require very simple manifold. Control is by means of a 4-way control valve. Operation is instantaneous and exceedingly positive.

Take your own drilling-control hook-up . . . does it include a conventional "Master Valve," or do you have the complete MASTERY over vicious well pressures provided only by a Cameron Pressure Operated Gate Valve?

Mechanically, and from the standpoint of your own safety and control, there is no other unit to compare with a Cameron Pressure Operated Gate Valve. Study the cross-section illustration at left. Note the single seat, and the massive ram-gate which, when pressure is applied, slams across the well bore instantly and positively. Even though the seat should be roughened, corroded or sand cut, the Cameron self-feeding packing element automatically feeds out and fills up inequalities. Seal is instantaneous and absolutely positive.

Here is a control valve with no delicate sealing surfaces, designed in every particular to eliminate possibility of failure to shut off when needed. If the world's best and most positive gate valve is not too good for the protection of your expensive rigs and costly well bores, ask for full details of the Cameron Pressure Operated Gate Valve. They will gladly be supplied without obligation.

CAMERON IRON WORKS, INC.

711 MILBY STREET, HOUSTON, TEXAS

EXPORT OFFICE: 74 Trinity Place, New York, N. Y.
MIDLAND: W. P. (Red) Knight
CORPUS CHRISTI: J. M. (Red) Teague
LOUISIANA: Pelican Well Tool & Supply Company
OKLAHOMA and KANSAS: Carson Machine & Supply Co.
MEXICO: J. W. Allen, Apdo. 483, Tampico, Tamps.

to the air, this iron forms a red gelatinous precipitate which may easily plug a well. The amount of iron present in water can be determined only in a laboratory. If it is greater than .3 to .5 parts per million of water it should be removed. This may be accomplished by sufficient aeration; that is, by spraying or pouring the water in such a manner that it is completely exposed to the air, and then filtered. A filter containing a special catalitic filtering sand may be used.

Where aeration is resorted to, oxygen is always added to the water, and will tend to increase the corrosion of the inside of steel pipe lines. This adds pipe scale to the water after it is filtered, and will hasten the failure of the pipe line. The scale so formed will probably be carried into the well, but is not so likely to cause any plugging, as it is heavy and will tend to fall to the bottom of the well in the very slow flow of water from the tubing to the sand face. If it should be carried to the sand face and stay there, the first removal of pressure from the well will cause a back flow which will tend to dislodge the scale and send it to the well pocket.

3. *Manganese.* The presence of manganese in Bradford flood waters in amounts (more than one part per million) sufficient to cause plugging is comparatively rare. However, it does occur at some points. Tests for manganese must be made in a laboratory. Treatment for corrosion will often take care of manganese troubles.

4. *Slime.* The green slime (algae) often seen in stagnant water will form in tanks exposed to the light, and can cause plugging trouble. When tanks are kept tightly covered, this growth will not take place, but a similar white form may rarely develop in the dark.

The algae can be effectively removed by adding copper sulfate; about 3 pounds for each 1,000 bbls. of water. This may be done by throwing the material into the tank or, better, by placing it in a cloth bag and hanging it just below the top of the water. In aggrevated cases, or where white growth exists, it may be advisable to treat the water with sodium hypochlorite by means of a special feeder. This treatment will handle the worst cases, and at the same time help to correct any acid or corrosive condition of the water.

Chlorine will remove any organic growth, but its use is to be discouraged for flood water treatment, as it should be applied only under the careful and constant supervision of a chemist. In addition, the use of chlorine tends to make the water acid and therefore corrosive, especially if too much is added, as is almost certain to be the case at times under the usual oil field supervision.

5. *Corrosion of pipe lines.* Corrosive water eats out the pipe lines from the inside and causes early failure of the line. In addition, the material removed from the pipe line may possibly cause plugging, but is far less likely to, as discussed above, than any other form of solid material carried by the water.

Corrosion is caused by an acid condition of the water. This is measured by determining the pH number with a simple apparatus many producers could profitably own. Sometimes tests for alkalinity and oxygen, made in a laboratory, are desirable. The pH number of the water should be kept between 8 and 9, preferably above 8.5. If this is done, the corrosive action of the water is greatly inhibited, and will be helped to a still greater extent if the contact of the water with air has been restricted so far as possible. As the pH of most raw water at Bradford lies between 6.5 and 7.5, treatment is necessary to raise this to a proper value. This is done ordinarily by adding lime or soda ash.

For oil country work the addition of lime may be treacherous since, like chlorine, without the constant attendance of a trained chemist, too much material is at times almost certain to be applied. When this occurs, solid lime is sent through the water and becomes another excellent plugging medium. In addition, the apparatus necessary to feed the lime to the water is rather expensive and complicated. A far better method of raising the pH value is by means of soda ash. This material will greatly help in reducing pipe line corrosion, is easily handled, and in any amount a careless operator is likely to supply can do no damage.

Bituminous linings for water pipe lines in the Bradford field have been tried as a means of overcoming corrosion, but are not generally accepted as advisable.

6. *Other substances.* Occasional salt waters may be found which in themselves should have no plugging effect unless the particular salts present will react with the inorganic materials found in the sand to form other solid substances. Some of these, however, may be very corrosive, and undesirable for this reason. It is possible that a high gypsum content might crystallize out and cause plugging in the well or in a pipe line. The best treatment for such water at present is to avoid it, since fresh water is so readily available.

7. *Sulfur.* The presence of hydrogen sulfur in water is easily detected by its odor. Sulfur in this form may attack the iron in the pipe lines and release iron sulfides which can cause plugging. Aeration should take care of sulfur in any quantities found in the Bradford area.

A competent water engineer has stated that water as it leaves the ground is in a naturally balanced condition, and the least necessary disturbance, by treatment, of this natural condition is best. This seems logical, and would indicate that filtering, with a minimium of the other corrective treatment suggested above will produce the best results in a flooding operation.

It should be emphasized that a test of a water sample will represent the condition of the water only at the time the sample was taken. Changes of wet and dry seasons and other conditions will change the water, so that it is important that the water should be tested at regular intervals, usually not less frequently than weekly. Where rapid changes in the condition of the water supply or treating apparatus are not likely, monthly tests will probably prove satisfactory. But where this is done, the operators should be on the alert for any unusual condition which might develop.

There is no occasion, therefore, for any seeming mystery to exist about the danger of a particular water plugging intake wells. A few simple tests will determine the presence or not of dangerous substances, and mild treatment is available at a relatively low cost, and in a form which can be safely handled by the usual oil field employe. By taking a few reasonable precautions and by installing only such treating equipment as is definitely shown by the water examination to be essential, the producer will keep his investment well within bounds and will be assured that he will lose no oil, nor be put to extra expense due to the plugging of his intake or pressure wells.

Drilling in the 12-mile extension area of the Rodessa field in Marion County, Texas

Japanese Oil Produces High-Octane Aviation Gasoline

High antiknock gasoline, declared to have an octane number ranging from 93 to 94, was prepared from the crude oils produced at Higashiyama and Ohmo, Niigata Prefecture, by Dr. Yusaburo Nagai, professor at Tokyo Imperial University and concurrently member of the staff of the Aeronautical Research Institute of the university. The gasoline is to be combusted exclusively in the long cruising-range monoplane designed by the institute and fabricated by the Tokyo Gas & Electric Engineering Co.

Crude oils from Higashiyama and Ohmo, Niigata Prefecture, which are owned by the Nippon Petroleum Co., were distilled into a series of gasoline in the plants installed in the Aeronautical Research Institute. These gasolines, which were distilled at from 71° to 125° C., had high octane value, ranging from 75 to 76, and were sensible to the addition of tetraethyl lead. The octane value was increased to 94 on the average by the addition of 0.1 per cent of tetraethyl lead.

After a long series of experimentation, Doctor Nagai concluded that better gasoline might be obtained from lower boiling fractions and that the octane value might be increased to 79 without excessively elevating vapor pressure. As a result of his further experimentation, the value was increased to 96 by adding 0.1 per cent of tetraethyl lead. Such a gasoline may be refined without special methods or plant. His airplane gasoline thus prepared has the properties shown in the accompanying table.

PROPERTIES OF GASOLINE

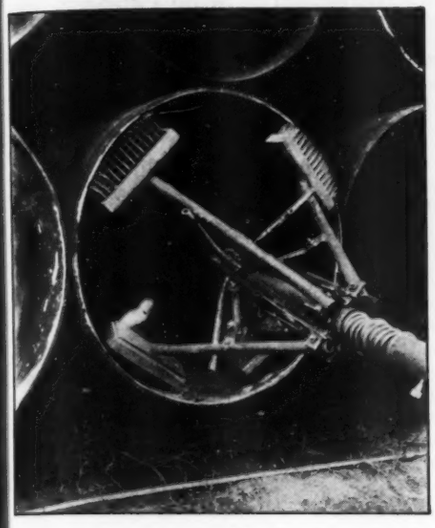
Distilling temperature, deg. C.:	From Ohmo	From Higashiyama
Initial boiling point	52.3	56.0
10 per cent	76.9	75.2
20 per cent	84.0	81.3
30 per cent	88.9	86.2
40 per cent	93.2	91.1
50 per cent	97.2	95.8
60 per cent	100.6	100.8
70 per cent	104.8	105.7
80 per cent	110.0	114.0
90 per cent	119.8	125.5
95 per cent	131.2	137.7
Vapor pressure, lbs./sq. in.	4.8	4.7
Unsaturated hydrocarbons, per cent	0	0
Aromatic hydrocarbons, per cent	2.0	2.0
Paraffin hydrocarbons, per cent	41.0	40.0
Naphthene hydrocarbons, per cent	57.0	58.0
Specific gravity	0.57	
Tetraethyl lead, per cent	0.0981	0.0981
Octane value	94.0	92.9

Doctor Nagai tested the above two gasolines in the Wright Cyclone SGR 1920 F-53 engine in the testing laboratory of the Nakajima Aircraft Manufacturing Co. and many other aero-engines in the Aeronautical Research Institute. According to him, there are many more oil fields in Japan which produce naphthene base crude oil, from which antiknock gasoline may be prepared, and the octane number may be increased to 87 by adding 0.1 per cent of tetraethyl lead in the majority of cases.

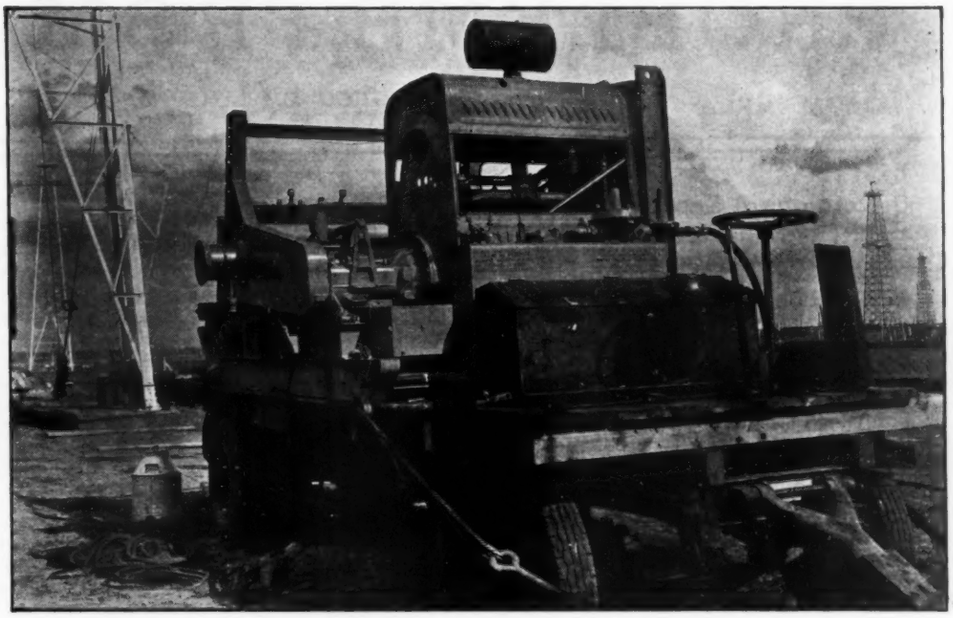
OPERATING IDEAS

Improvised Pipe Cleaner

Large diameter pipe in one Pacific Coast gas company's pipe yard is cleaned inside with the brushes shown in the accompanying photograph. A rotary motion is obtained by means of a small compressed-air engine. After the inside has been thoroughly cleaned



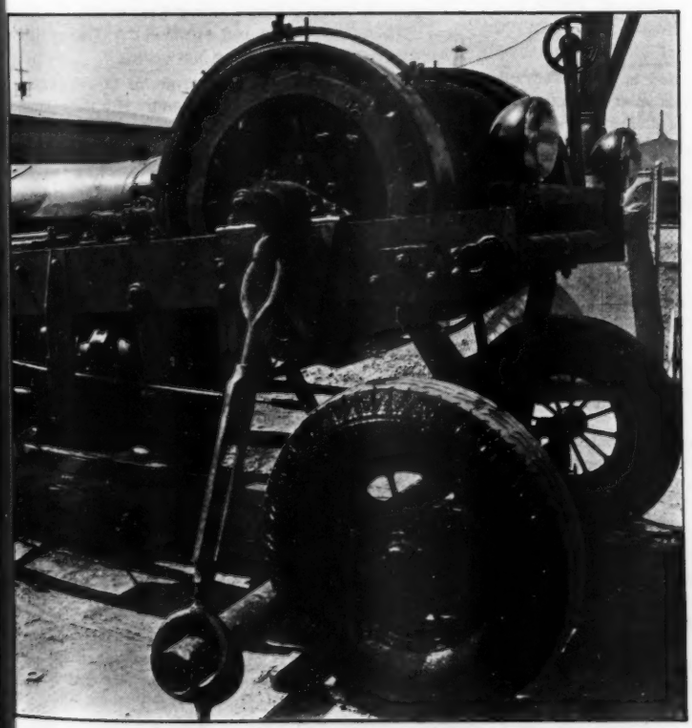
this joint will be painted by a spray gun inserted into the joint. In this way pipe deterioration in the yard is practically eliminated.



Rod- and Tubing-Hoist Mounted on Reclaimed Truck

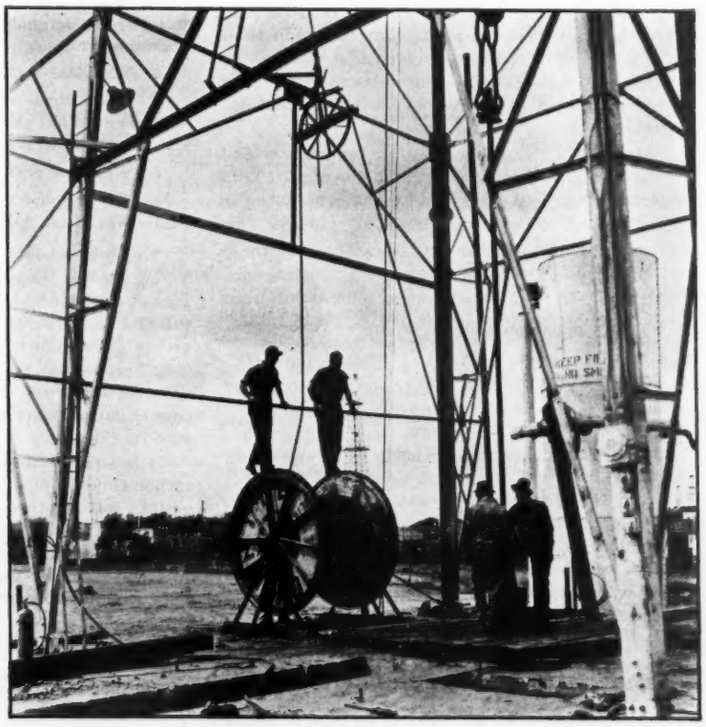
One of the major operators in the Edmond field of Oklahoma has recently purchased a heavy-duty rod- and tubing-hoist which was mounted on a 194-inch wheel base trailer made from a reclaimed truck chassis. The steering mechanism of the trailer was revamped so that the operator can quickly spot the machine in position on the site of the pulling job.

Anchoring Well-Servicing Tractor



An operator in the Wilmington, California, field has devised a simple method for anchoring tractors while servicing wells. To anchor the front part of the tractor, large I-bolts are placed in blocks of concrete buried below the surface with about 6 inches of the bolt protruding above the surface. By using turn-buckles and I-bolts on the tractor it is held firmly in place by a piece of 3-inch tubing as shown here.

Pump Cable Spooled by Treadmill



A major oil company operating several electric bottom-hole pumps has adopted use of the treadmill system for respooling electric cable as it is brought out of the hole with the tubing. As tubing is raised the clamps are loosed to separate the cable and tubing and two men tread the reel thus recoiling the cable. In the Oklahoma City field, due to the large amount of sand present, pumps have to be removed and repaired frequently. This method has proved highly satisfactory.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Use of Natural Gas for Burning Brick and Cement

In the issue of Sept. 9 page 54 on this page there is an answer to a question asked by P. S. about the use of natural gas for burning brick and cement. The inquirer was referred to the American Gas Association for further information and below is the reply sent by that association.—L. G. E. B.

Your inquiry to The Oil and Gas Journal in reference to brick and cement burning has been turned over to me. Answering your questions in the same order.

1. It is quite possible to use gas for burning bricks and for firing cement kilns. Furthermore, both of these are common applications of natural gas, particularly dry natural gas. Under separate cover, I am sending you a copy of Industrial Service Letters No. 20 and No. 25 which list the references to many industrial gas applications among which you will find a number dealing with brick and cement work.

2. There is no standard procedure for applying gas to brick and cement work because there are so many types of brick and cement kilns. Naturally, there is a big difference between the firing arrangements in a Harrop continuous brick kiln, in a conventional beehive kiln and a rectangular brick kiln. Furthermore, the nature of the brick itself affects the firing cycle and the heat requirements. In the case of cement production, the competition between powdered coal and natural gas is very keen, but in the last five years a considerable number of the larger kilns have been operated on natural gas.

A rule of thumb measure for preliminary estimates of gas required for round, down draft kilns is that 17,500 cu. ft. of natural gas is about equal to 2,000 pounds of bituminous coal.

Typical results from actual installations are as follows:

Type kiln and ware—	Finishing temperature (Deg. F.)	Quantity of fuel per ton of ware (natural gas)
Round, down draft, face brick	2,300	6,775
Rectangular, down draft face brick	1,900	*4,355
Railroad car tunnel (muffler type) face brick	2,000	*2,165

*These two kilns at same plant, burning same gas and firing same ware.

3. There are a great many applications of gas throughout the United States but it would not be practical to try to list them. The trend for both brick and cement operations is to natural gas firing wherever this fuel is available at competitive prices.

Tenders for Foreign Shipments of Oil

I would like to get the name of the man or parties controlling and issuing tenders for export shipments of oil in Oklahoma and Texas.—C. W. S.

There are no tenders issued in Oklahoma.

In Texas tenders for export shipments of crude oil are issued by the local supervisors for the Railroad Commission of Texas located at the ports. Corpus Christi and Houston are principal ports and Beaumont is a secondary port for shipment of oil from Texas.

The tenders start with an SW 2 field tender covering the production of the oil by the well and delivery into the lease storage tanks.

The next tender is SW 3 covering the movement of the oil from lease tanks to pipe line.

This is followed by a third tender from pipe line to port. When the oil reaches the port it may be delivered directly into the tanker and then a fourth SW 3 form is used but if the oil has to go into storage tanks at the dock it is necessary to secure an SW 6 tender in addition to the SW 3 tender to clear this oil.

By this system the oil is traced from source to the boat and checked for allowable production from the well. These tenders are all issued by the port supervisor but it is necessary for the shipper to trace back through the field to secure the complete information required to clear a shipment.

Trust this gives you the information you desire but if you need more details suggest you write to the Texas Railroad Commission, Austin, Tex.

Design of Gasoline Pipe Lines

Without obligation, could you advise me:

1. If it is feasible, or practical to transport gasoline from the seaport to the interior by means of a pipe line?

2. If so, can the same line be used to transmit different types, or grades of gasoline, by means of air pockets or otherwise?

3. What kind of pipe is used?

4. The distance contemplated is about 200 miles, with about 700 feet elevation from point of intake to terminal; would booster pumps be used, and if so what type?

5. What size pipe for this distance would be best?

6. Can you give me the name and address of companies who install this kind of work?—T. W. A.

You are referred to an article by Frank R. Young on the "Design and Cost of Gasoline Pipe Lines" published in the Pipe Line Edition of The Oil and Gas Journal, September 24, 1936. This article gives data which will answer most of the questions you ask but it still remains to apply these data correctly and for that purpose you should consult an engineer conversant with this type of pipe line design.

It is entirely feasible to transport any hydrocarbon fluid by pipe line under the conditions you outline, but whether it would be profitable is another question.

Because of the fact that moving gasoline or other products by pipe line requires mass movement and therefore relatively large volume of sales at the terminals it is in many instances more economical to transport the material by tankcar or other means.

The fact that there is an elevation of 700 feet in the 200 miles of proposed line does not in any way effect the feasibility of the project. This means a hydrostatic pressure of about 350 pounds per square inch which is by no means excessive.

You are referred to the contractors who carried advertisements in the Pipe Line Edition mentioned above for further information on this subject. Or you can get names out of the new edition of this pipe line number to be published September 16.

Measurement of Sand Permeability

I note the measurement of sand permeability given in darcys and millidarcys. Where can I find formulae or necessary information to apply such measurements to actual water migration under known conditions of input and pressure.—C. E. M.

The American Petroleum Institute, 1508 Gulf States Building, Dallas, Texas, has prepared a "Standard Procedure for Determining Permeability of Porous Media" and it has been published in pamphlet form and can be purchased from them for 25 cents per copy.

In this report it is stated that "The standard unit of permeability of porous media to fluids shall be the 'darcy' " which is defined as "the rate of flow in milliliters per second, of a fluid of one centipoise viscosity through a cross section of one square centimeter of a porous medium, under a pressure gradient of one atmosphere (76.0 cm. mercury) per centimeter and conditions of viscous flow."

The pamphlet then goes on to outline methods for making measurements and calculations, laboratory procedure and includes test data and conversion tables.

For further information about measurement of actual water migration under known conditions of input and pressure you are referred to a paper by M. Muskat and R. D. Wyckoff published by the American Institute of Mining Engineers, Technical Paper 507 (1933) and entitled "A Theoretical Analysis of Water-flooding Networks."

Also another paper in Petroleum Development and Technology (1936) published by the Petroleum Division of the A. I. M. E. and prepared by Ralph J. Schilthuis and entitled "Active Oil and Reservoir Energy."

Depth of Wells in This Country

We would like to know the approximate number of oil wells in the United States that are under 4,000 feet in depth, and the percentage of wells of that depth compared with the total number.—J. L. C. Jr.

In compliance with your request the following statistics have been compiled.

State or district—	4,000 ft. or less	More than 4,000 ft.	Total wells
New York	14,450	.....	14,450
Pennsylvania	79,891	84	79,975
Ohio	32,750	.....	32,750
West Virginia	13,300	.....	13,300
Kentucky	13,400	.....	13,400
Michigan	1,551	.....	1,551
Tennessee	42	.....	42
Indiana	1,515	.....	1,515
Illinois	13,050	.....	13,050
Kansas	20,671	89	20,760
Oklahoma	51,729	2,843	54,572
North & Central Texas	23,115	.....	23,115
West Texas	6,139	319	6,458
Texas Panhandle	3,312	.....	3,312
East Central and East Texas	25,324	215	25,539
Gulf Coast Tex. & La.	7,429	692	8,121
Southwest Texas	7,452	.....	7,452
Arkansas	2,637	5	2,642
North Louisiana	2,789	370	3,159
Wyoming	3,695	40	3,735
Montana	1,666	.....	1,666
Colorado	146	46	192
New Mexico	1,651	258	1,909
California	5,158	7,692	12,850
Total	332,362	12,653	345,515

This indicates that 96.325 per cent of the wells in this country are less than 4,000 feet in depth.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

No Standard Gas Burner Known and Orifice Formula

What are the specifications which are followed when constructing the Standard Burner for gas ranges, especially for artifical gas? What is meant by the orifice formula?—D. S.

The subject is well covered in U. S. Bureau of Standards Circular No. 394, from which the quotations following are made:

The National Bureau of Standards has never recommended or approved a "standard" burner for general use or even for all appliances of any one type, because such a standard is not considered desirable. A burner to be good must be designed with reference to the appliance in which it is to be used, and no burner can be tested and judged to be superior or even satisfactory except as an integral part of the whole appliance. Representations to the effect that a particular burner is recommended by the National Bureau of Standards or has been built in accordance with the bureau's specifications are, therefore, misleading.

The flow of gas through an orifice under the small pressure of the usual city supply may be represented for practical purposes by the following equation:

$$q = aK\sqrt{\frac{h}{d}}$$

in which q is the quantity of gas delivered per unit of time, a is the area of the orifice, h is the fall of pressure through the orifice (ordinarily with the gas cock wide open h is nearly the pressure above atmospheric of the gas in the supply line), d is the specific gravity of the gas referred to air (air = 1.00), and K is an "orifice constant" or "coefficient of discharge" that depends mainly upon the form of the orifice and the units employed.

For the average drilled orifice, the area of which is computed from the nominal size of the drill and which has an angle of approach of 60 degrees and a channel at least as long as its diameter, the value of K may be assumed to be 1,300 without much error. The formula then becomes

$$q = 1{,}300\,a\sqrt{\frac{h}{d}}$$

The formula does not very accurately represent the effect upon flow of changing either the size of the drill for such orifices or the pressure of the gas, but is probably accurate enough for most practical purposes.

Distinguishing Property of Fullers Earth Production and Marketing

What are the chief properties by which fullers earth is identified? Could you give me information about the business, what is the sale price, where is it produced and what is the condition of the market?—E. H. W.

Fullers earth is a clay, usually of very light cream color, which when dry, has the power to remove color from the various oils, animal, vegetable and petroleum, by contact and percolation. This bleaching action is the distinguishing characteristic; the chemical composition and physical properties are not reliable. Adams and Metcalf give this definition of fullers earth.

"Fullers earth is a mineral substance resembling clay and having physical properties that make it capable of removing basic colors from solution in mineral, vegetable, or animal oils. The name does not imply any particular chemical composition but was derived from the use to which the earth was formerly put by fullers to full or scour and cleanse cloth of grease and by furriers to remove grease from fur. For statistical purposes the Bureau of Mines classes as fullers earth all natural bleaching or filtering claylike materials that have high adsorption capacity without previous chemical treatment for activation. Hatmaker and Middleton have supplied an interesting description of the physical and chemical properties of fullers earth and of the qualities the material should possess to insure satisfactory clarifying of oils and fats."

The Minerals Yearbook gives the total production of fullers earth in the United States during 1936 at 230,814 short tons, having a value of $6.50 to $12.50 per ton at the mine, a total value of $2,264,978. This quantity was produced by 19 plants. Over 75 per cent came from Florida, Georgia, Illinois, Indiana and New Jersey. Additional supplies were obtained from Colorado, Nevada and Texas.

The U. S. Bureau of Mines has reported the production of fullers earth since 1895 to date. In this period, up to 1935, the production has been 4,379,846 tons, valued at $54,955,724. Florida furnished 40 per cent, Georgia 33 and Texas 11 per cent. Georgia is the largest producer now.

Approximately 90 per cent of the fullers earth produced is used for discoloring petroleum oils, the rest is applied for treating fatty oils, including a trace for miscellaneous purposes. The quantity of fullers earth consumed by petroleum refiners for discoloring oils has decreased since 1930, probably due to the increased use of bentonite and activated earths. The 1937 Yearbook suggests that there is a tendency to return to the use of fullers earth for percolation filtering in place of the chemically activated earths and the fine earths.

Reference: Minerals Yearbook 1936, U. S. Bureau of Mines, Chapter on Fullers Earth by Adams and Metcalf, part III, page 947. Minerals Yearbook 1937, page 1,261. Hatmaker and Middleton, Fullers Earth, Mineral Resources in the United States, 1931, pt. 2, page 73.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Naphthalene

Use—Sludge inhibitor in fuel oils and depressing pour point.

Form—White crystalline flakes.

Odor—Distinct strong coal tar.

Formula—$C_{10}H_8$.

Specific gravity—1.15.

Melting point °F.	176
Boiling point °F.	424

Limitations

Color	Snow white
Melting point, min. °F.	175

Relation of Barrels of Crude Oil to Metric Tons

I find several different values representing the number of barrels of oil required to weigh a ton and wish to ask if you have a standard unit which may be used when converting from tons to barrels.—T. E.

The common practice followed in the United States is to use the weight of 300 pounds per barrel of oil, making 7.3 bbls. to the metric ton of 2,204 pounds. When the gravity of the oil is known the exact relation of pounds, gallons, barrels and tons may be readily determined.

Mihail Pizanty, Moneteur du Petrole Roumain, has discussed these relations in "Standardization of the Methods of Calculating Petroleum Statistics." He states that the American Petroleum Institute has recommended a medium density of crude oil of specific gravity 0.8600, or 33° A.P.I., which corresponds to 136.7 kg. (300.7 pounds) per barrel; 7.3 bbls. per metric ton. Pizanty calculates the world average density of crude oil at 0.8617, or 32.7° A.P.I., which makes 137 kg. (301.4 pounds) the weight of 1 bbl. The volume of the American barrel is given at 158.982 liters of water with a density of 1 at 4° C. To find the number of kilograms per barrel for each kind of oil, based on the density calculated for each country, the following formula was used:

$$D \times V = G$$

where D = density, V = volume (158.9827 liters density, 1 is equivalent to 1 bbl.) and G = number of kilograms which is equivalent to 1 bbl.

Cracking and Composition of Olefins

What unsaturated compounds make up the gas formed in cracking?—D. N.

The unsaturated hydrocarbons, or olefins, produced in the cracking processes constitute the foundation material for the synthetic preparation of numerous substances. Much research is now devoted to them. Marek and Hahn, in Catalytic Oxidation of Organic Compounds in the Vapor Phase, present an extensive discussion of the subject. The material here is arranged from this book. Egloff has estimated that 275,000,000,000 feet of gas is available from cracking. The composition of the cracking still gas may range in per cent by volume as follows: Ethylene 0.8 to 33, Propene 0.75 to 20, Butenes 0.25 to 10, Pentenes 0.2 to 1, Butadiene 0.5 to 1, Hydrogen 2 to 7, Paraffins 40 to 90.

A vapor phase process gas containing a total of 54.9 per cent unsaturates was composed of the following:

UNSATURATES IN VAPOR PHASE GAS

Ethylene	54 0
Propene	28 0
Butenes	9 0
Pentenes	1 7
Higher olefins	6 1
Butadiene	1 2

References: Marek and Hahn, Catalytic Oxidation of Organic Compounds in the Vapor Phase, page 204. Consult Chemical Abstracts for numerous additional references.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

➤➤➤ and now! in WEST TEXAS

H.C. SMITH Rock Bits

Left to right: Harry Prickett, salesman for Rodman Supply Co.; Art Shierberl, Drilling Superintendent for the Texas & Pacific Coal & Oil Co., and A. P. Cooper, driller, at the Texas & Pacific Coal & Oil Co.'s Vaden No. 2 in Winkler County, Texas. The H. C. Smith Rock Bit shown above made 705 feet and is being held for a re-run, both bearings and cutters being in good shape.

are available through

RODMAN SUPPLY CO.

The appointment of Rodman Supply Company as distributors of H. C. Smith Oil Tools in Texas now makes our Rock Bits available in this state. Investigate for yourself the superior engineering design of the H. C. Smith Rock Bit, the sturdy, wear-resisting steels used and the methods of operation recommended, that have resulted in an extremely high co-efficient of performance capability. H. C. Smith Rock Bits are built to do the tough jobs well and to lower the footage cost of hole dug.

H C Smith Oil Tool Co.

General Offices and Plant, Compton, California

Texas Distributor: RODMAN SUPPLY CO., Odessa, Texas.

FIELD OPERATIONS

Summarizing the Week's Developments

A South Eunice well in section 7-22-36, Lea County, New Mexico, was estimated good for 20,000 barrels of oil daily. North side of the Monument field was extended westward with small producers in sections 23-19-36 and 27-19-36. A 526-barrel well was completed in the Jackson field, Eddy County.

OKLAHOMA

A well in the Billings pool, Noble County, Oklahoma, started off at 1,660 barrels of oil in three hours, with the drill pipe in the hole, and two others in that pool flowed 1,607 barrels in 8 hours and 3,226 barrels in 24 hours, respectively. All produce from Wilcox sand. In the Crescent pool in Logan County a well flowed 488 barrels in three hours, but was not yet completed. Carter Oil Company's important test in section 16-25-3w, Grant County, made 250 barrels of oil and 177 barrels of water in a 12-hour test. It is not a completion.

KANSAS

Seven out of nine wildcats completed in Kansas in the past week opened new producing areas. The Ainsworth pool in Barton County and the Shutts pool in Ellis County were extended. A recently completed well in Woodson County on a 2,000-acre block tested 200 barrels of oil in 23 hours from a sand at 1,203-06 feet.

TEXAS

Ector and Winkler counties in West Texas continued to supply big wells. A wildcat 4 miles north of Cochran County's first pool swabbed 8 to 10 barrels an hour after an acid treatment. The Harper field in Ector County was extended 2 miles. Wildcatting in Southwest Texas has reached a new peak in the number of tests. The Conroe trend may have a fourth oil field the latest being in Newton County, where a well is under process of completion which shows oil on a drill-stem test. A second producing horizon has been found in the Spurger field in Tyler County, the discovery well flowing 529 barrels a day. A new sand was found in the Keeran field yielding 200 barrels a day in the discovery well.

TEX-LA-ARK AREA

One of the most important recent discoveries in Louisiana occurred in Plaquemines Parish in the southern part of the state where Continental Oil Company opened a pool in the Sparta member of the Cook Mountain horizon, a new pay for that area. The well tested 240 barrels a day. In northern Louisiana the Lisbon field in Claiborne Parish was extended 1½ miles by a test that had been drilled to 5,800 feet and then plugged back to a new total depth of 5,234 feet. Eleven new oil wells were completed in Lisbon. A deep test in the Schuler field looked promising and may develop into the deepest producing well in Arkansas. A 15,000,000-foot gasser was completed in the Jackson gas field in Hinds County, Mississippi.

ILLINOIS

A new pool was opened in Richland County, Illinois, north of the Noble pool. It may turn out to be an extension to that pool as it is only about 2 miles distant from it. An important deep test in Marion County was dry in the Devonian after penetrating several upper sands common in the district.

CALIFORNIA

Important completions were recorded in the Wilmington and El Segundo fields in California. One El Segundo completion started at 3,610 barrels per day.

Completions in All Fields

(Week Ending September 18, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	81	18	8	107	3,108	2,513
Ohio	6	10	13	29	850	516
Indiana	0	0	0	0	70	134
Kentucky	10	2	8	20	428	199
Illinois	13	0	3	16	128	31
Michigan	13	0	2	15	564	516
Kansas	42	5	10	57	1,845	1,157
Oklahoma	37	3	19	59	1,292	1,869
Texas:						
North Central Texas	24	1	14	39	2,036	1,896
West Texas	51	0	5	56	1,940	1,066
Texas Panhandle	13	2	0	15	538	414
East Texas	46	0	1	47	1,656	1,895
East Central Texas	11	0	2	13	506	228
East Texas Border	4	0	0	4	266	74
Gulf Coast Texas	28	0	3	31	1,104	873
Southwest Texas	48	1	19	68	2,368	2,033
Total Texas	225	4	44	273	10,414	8,479
North Louisiana	15	0	2	17	467	480
Gulf Coast Louisiana	2	0	3	5	326	362
Total Louisiana	17	0	5	22	793	842
Arkansas	0	0	0	0	108	67
Montana	8	1	0	9	159	164
Wyoming	2	0	4	6	81	91
Colorado	0	0	1	1	12	19
New Mexico	11	2	1	14	538	407
Utah	0	0	0	0	2	5
California	18	0	4	22	1,090	812
Total United States	483	45	122	650	21,482	17,821
Total previous week	496	53	128	677		
Difference	13	8	6	27		

Outstanding Fields—Highlights

(Week Ending September 18, 1937)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Amelia	1	13	2	1,159	85	4,397
Hastings	7	18	9	4,821	30	20,678
McCampbell	2	15	4	660	49	3,950
Saxet	3	25	2	350	537	48,870
Benavides	3	17	3	425	54	4,300
East Texas	71	110	46	2,293	23,564	479,250
Talco	2	36	10	2,850	469	31,150
Ector County	10	93	14	13,739	616	32,400
Winkler County	9	53	14	8,587	1,415	48,050
OKLAHOMA						
Oklahoma City	0	5	1	22	1,135	147,250
Fitts	4	32	2	348	867	86,175
Billings	2	8	1	819	46	7,625
KANSAS						
Ellis County	7	52	9	4,500	198	8,045
Reno County	4	16	0	0	476	18,250
Russell County	10	62	10	6,443	851	36,765
Rice County	7	47	6	2,644	975	43,810
NEW MEXICO						
Lea County	14	116	9	4,087	1,455	106,420
LA.-TEX.-ARK.						
Rodessa, Ark.	5	21	0	0	10	3,952
Rodessa, La.	3	13	1	320	408	51,131
Rodessa, Tex.	4	20	4	570	347	33,446
Lisbon, La.	6	24	11	8,659	111	12,888
Jennings, La.	2	12	0	0	66	10,189
MICHIGAN						
Buckeye	13	64	8	0	222	21,979

Southwest Texas District

By
GEORGE WEBER

WILDCATTING HAS REACHED HIGHEST MARK IN DISTRICT

HOUSTON, Tex., Sept. 20.—San Patricio and Aransas County developments combined to place the focal point of interest this week on the Lower Gulf Coast of Southwest Texas. A wildcat showing in San Patricio county is attracting considerable attention, and the McCampbell field and Lamar prospect made news in Aransas County. In the wildcatting program, which has reached record proportions throughout the area, Duval County is showing interesting developments, and in field extensions, minor discoveries were reported in various districts of the section.

The Fault Line Zone continues very active, with drilling strong in Caldwell and Guadalupe counties, and numerous wildcat strikes drawing attention to Bastrop County.

Located 1½ miles northwest of the town of Odem, San Patricio County, F. P. Schwab No. 1 Smith is showing for possible new production. The wildcat test cored the top of the Heterostegina at 3,977 feet. Coring ahead, the test found a sand section at 5,425 feet. A drill stem test made at 5,425-36 feet showed a recovery of 160 feet of oily mud and 900 feet of oily salt water in nine minutes. Operators are coring ahead on the test seeking deeper pay horizons. Contract depth is 6,500 feet.

In the same county, the Argo Oil Corp. is drilling No. 1 Soehnge, a wildcat, 1½ miles north of Mathis, near the Mathis-Oakville highway. Another wildcat, which has attracted attention for several weeks, is the Danray Oil Co. No. 1 Davis, located 3 miles southwest of the McCampbell field of Aransas and San Patricio counties, and 4 miles east of the town of Gregory. Although information is being withheld generally on operations of the test, it is known that the operators set a short string of 5-inch casing at 7,117 feet after casing had originally been set to test sand at 6,606 feet. The bottom string was perforated at 7,100-10 feet and salt water with a showing of gas was tested. Retainer is being set.

The Waterbury Oil Corp. No. 1 Davis, in the same general vicinity, and 2 miles due west of the Waterbury test, is drilling below 4,600 feet. Results will be watched with interest by operators who are concerned with the southeastern section of the county near Gregory, Taft and Aransas Pass.

Up the Coast

Up the coast from Corpus Christi, and located on the Lamar Peninsula in Aransas County, Barnsdall Oil Co. No. 2 Edwards is reported completing for a gas well. The test, bottomed at 9,785 feet, where a fishing job ensued, was plugged back, whipstocked, and drilled to 8,267 feet, in a sidetracked hole. Seven-inch casing was run to 8,164 feet and perforated at 8,012-23 feet, where it tested muddy water and salt water with an odor of distillates. After squeezing perforations at that level, operators perforated at 7,500 feet, and tested 5,000,000 feet of gas. Present plans call for testing of higher sands before completing as a gasser at 7,500 feet. The Barnsdall well has been drilling since February, when the first test, No. 1 Edwards blew out at 7,994 feet and ran wild making wet gas, some oil and finally salt water, before going dead.

In the McCampbell field four new producers were brought in during the week flowing from the 6,500- and 7,100-foot sands. One deep test in the field is exploring sands below 7,100 feet, at which the deepest field sand is located.

To the south, in Nueces County drilling activity, interest was divided among the Saxet, Flour Bluff, Luby and Stratton fields. Saxet operators accomplished no outstanding results in expansion of new discovery, but as the most active drilling field in Southwest Texas it is the center of much attention. Flour Bluff, having been defined on the southwest by two dry holes, continues active, with the producing limits gradually extending in other directions. In that field, contract was let recently for construction of a natural gasoline plant, which will process gas produced with the oil.

Luby, a new producing area southwest of Corpus Christi, was extended 1,400 feet to the northwest by completion of the Seaboard Oil Corp. No. 2 Luby. The new well came in making an initial production of 159 bbls. from sand at 5,050½-54½ feet.

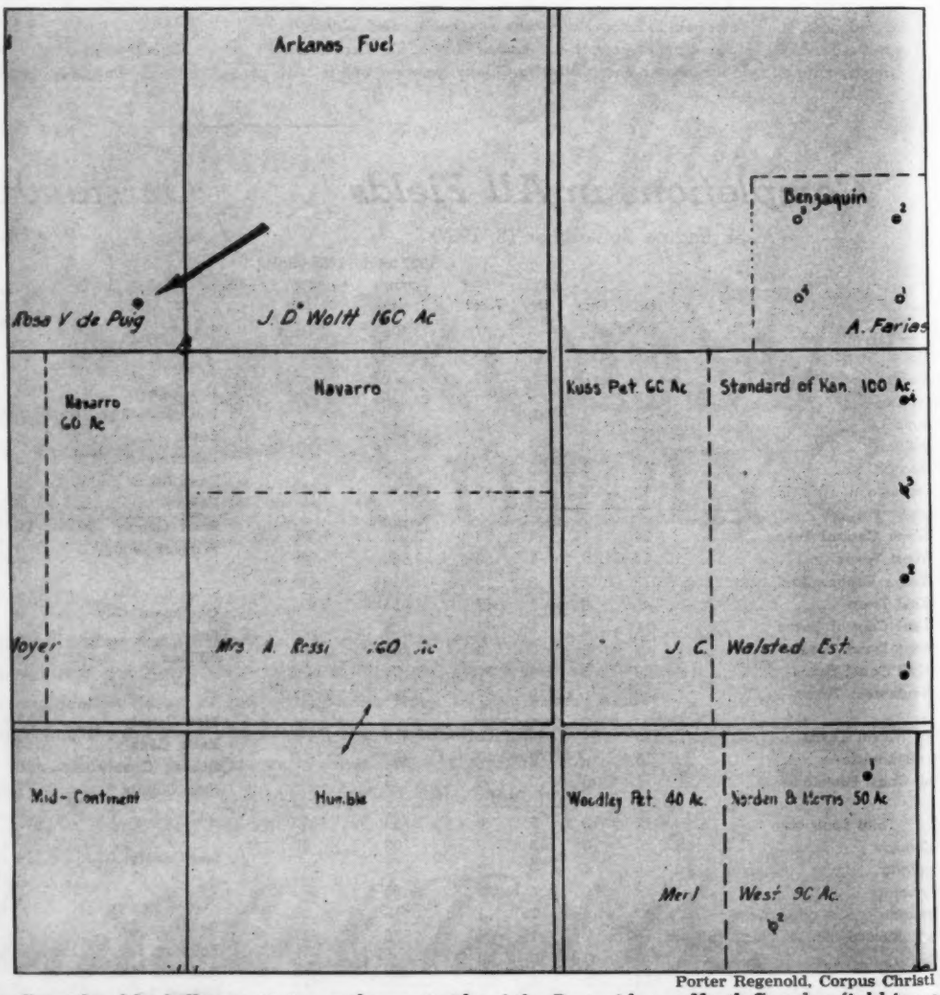
In the same field, an east offset to the discovery well, Seaboard No. 1 Shaefer plugged back from a total depth of 7,310 fet and perforated at 5,058-62 feet to complete in the regular field sand. The test cored a deeper sand at 7,290-7,300 feet, which showed indications of opening production in a second horizon, but operators tested gas in the deep sand, and were, at latest reports allowing the well to clean oil and wash water in the regular field sand. Seaboard has staked location for an interesting wildcat in the Luby area. It is No. 1 John M. Luby, located north of the field.

Activity in the Benavides field of eastern Duval County continued to increase during the week. V. L. Blanchard has completed an important northwest extension, and is moving on to a new location in the same general area for a second test. Activity is divided rather evenly over the field, and much proven undrilled acreage remains due to recent extensions to the northeast, south, east and northwest.

Although the Benavides or North Sweden field continues the most important now undergoing development in the Laredo district, other areas in Duval and Webb counties are receiving added attention. Duval County alone has a total of nine active and prospective wildcat tests, despite the abandonment of five wildcats within the county limits this week.

The Kohler area is gaining in activity. Last week, Speed Oil Co. found a likely sand at 2,434-50 feet in No. 1 Gruy. The test, located 2 miles northeast of the Kohler field drilled the unexpected sand in the Lower Hockleyensis, and was carried to a total depth of 3,152 feet before abandoning. Although a Schlumberger log of the hole showed indications of oil at the sand level, the ab-

(Continued on Page 114)



Porter Regenold, Corpus Christi

Considerable drilling activity on the west side of the Benavides or North Sweden field is expected as a result of the mile northwest extension recently completed by V. L. Blanchard. The wildcat, completed for a good producer in the lower sand of the field, has proven several hundred acres

You Get More Out of a LAYNE SCREEN

Eight or ten openings between the wires pass over the milled groove in the Layne Milled Groove Screen. Oil is directed from this large number of openings through the pipe perforation. Every screen opening brings in its share of oil. There are no idle openings or parts of openings in a Layne Milled Groove Screen. The Layne & Bowler Company, Houston, Texas —U.S.A.

THE LAYNE

MILLED GROOVE SCREEN

Eastern Field Report

By STAFF CORRESPONDENT

KANAWHA COUNTY GAS WELL IS GOOD FOR 20,000,000 FEET

PITTSBURGH, Pa., Sept. 20.—In addition to several locations in the proven Oriskany fields in Kanawha County, West Virginia, three tests are scheduled for that formation in other counties. In Otter district, Clay County, not far from the Braxton County line, the Pittsburgh & West Virginia Gas Co. has spudded in and started drilling a test on the Jess Chapman farm. On the Gassoway Quadrangle, it is located latitude 38 degrees, 37 minutes, 30 seconds, and one-quarter mile up the first north fork of Boggs Fork east of longitude 81 degrees. The ground elevation is 988 feet and it is east of the Chestnut Ridge. The Lower Devonian is expected at between 6,200 and 6,300 feet.

In Roane County, the Ohio Valley Gas Co. is building a new rig to deepen No. 2 on the M. C. Larch farm in Harper district. It is one-half mile east of Kettle between Left Fork and Green Rush Fork and is found in the square latitude 38 degrees 30-35 minutes, longitude 81 degrees 25-30 minutes. The present depth is 4,400 feet.

In Boone County, the Owens Illinois Glass Co. is deepening No. 12 Bull Creek Coal Land Co. in the Peytonia district and it is now 4,410 feet deep. It is 1½ miles south of the United Fuel Gas Co. No. 4,067 on the Black Band Coal & Iron Co. lease which reached the Oriskany.

SOUTHEAST OHIO

Natural Gas Co. of West Virginia is drilling at 5,400 feet, deepening the test on the D. Desellem farm in section 26, Wayne Township, Columbiana County. Same company's test on the J. C. Workman farm in Madison Township is being shot this week, and has a fair showing of gas in the Oriskany sand, though the gauge is different due to the sand freezing.

In Coshocton County, the Preston Oil Co. completed No. 2 J. L. and J. K. Myers farm in section 6, Perry Township, in the Clinton sand, total depth 3,135 feet. After the shot it appears good for 45 bbls. a day.

In Hocking County, Preston Oil Co. completed No. 1,645 on the Sunday Creek Coal Co. lease, section 11, Ward Township, in Clinton sand at 3,568 feet. It produced 25 bbls. the first day after shot.

In Knox County, Knox Exploration Co. drilled a dry hole on the Robert Crider farm, Lot 25, Union Township, through Clinton sand to 2,880 feet.

In Licking County, Blue Rock Oil & Gas Co. completed No. 4 Virgil L. Smith, section 14, Fallsbury Township, in Clinton sand at 3,104 feet. It produced 35 bbls. the first day after shot.

In Medina County, E. R. Edson & Son Co. drilled a dry hole on the C. L. Billman farm, Tract 14, Lot 1, Homerville Township, through Berea grit to 525 feet.

In Perry County, E. C. Marshall and others completed No. 14 E. Newbury farm in section 13, Monroe Township, in Berea sand at 1,149 feet. It produced 2 bbls. the first day after shot. In section 28, Clayton Township, Kenova Gas & Oil Co., on the John C. Cable farm, drilled through Clinton and Medina sands to 3,426 feet. It was dry, but a showing of oil in the Berea sand will be shot. In the SW quarter of section 11, Reading Township, the Pure Oil Co. drilled No. 3 Pius Snider through the Clinton sand to 3,131 feet. It was also dry.

SOUTHWEST PENNSYLVANIA

Three gas wells were completed in Southwest Pennsylvania. In Amwell Township, Washington County, Carnegie Natural Gas Co. completed No. 3 R. M. Carrons at a total depth of 2,897 feet. The Nineveh Thirty-foot sand was at 2,870 feet with 500,000 feet of gas at 2,887-92 feet.

In Richhill Township, Greene County, Natural Gas Co. of West Virginia completed a test on the O. M. Grinnage farm at 3,150 feet with the Fifth sand topped at 3,144 feet and 461,000 feet of gas at 3,146 feet. In this township, O. I. Dille is drilling at 1,085 feet and running 10-inch in the test on the J. M. Phillips farm. Smith McCracken is down 800 feet on the Asa Hughes farm. Burleigh Wright has a rig standing on the Rush farm.

In Greene County, Manufacturers Light & Heat Co. completed No. 1 M. H. Nichols, in Center Township, at 3,329 feet as a gas well. Bayard sand was at 3,302-07 feet with gas at 3,303-06 feet. The gauge was 228,000 feet a day.

In Wayne Township, Eddy & Johnson made a location on the E. Maple farm. Peoples Natural Gas Co. are rigging up to deepen the Louis Park test. In Gilmore Township, Duquesne Gas Co. is drilling at 3,250 feet on the T. M. Hennen farm. H. D. Freeland is down 1,490 feet on the R. B. Coen farm. In Springhill Township, Cochran and others are rigging up No. 4 Strope heirs. Nelson H. Richard & Co. are cementing cave at 1,900 feet in No. 1 Rossell Sammons.

In Greene Township, Greene County, Anna L. Garard has started drilling No. 4 Jenks Minor. In Aleppo Township, Union Gasoline & Oil Corp. is deepening No. 3 T. M. Gallentine with the Fourth sand at 3,441-51 feet and some oil at 3,446-49 feet. It is drilling at 3,485 feet. This company is rigging up No. 5 on the same farm. In Freeport Boro, Null & Milliken are drilling at 3,155 feet in No. 3 W. P. Hoskinson.

In Center Township, Greene County, Carnegie Natural Gas Co. is waiting for cement to harden before completing No. 2 J. H. Orndoff. It is expected to be a fair producer in the Nineveh Thirty-foot sand. Milliken, Myers & Hoskinson are moving in a rig for No. 4 Charles Harvey. West Virginia Gas Co. is drilling at 2,600 feet on the Braddock & Cook lease. Carnegie Natural Gas Co. has a rig standing for the No. 3 J. W. Milliken.

In Washington Township, Greene County, Charles L. Mong and others have a rig up for No. 2 Jacob Johns. Equitable Gas Co. is building a rig on the Pratt Yeager farm. Carnegie Natural Gas Co. is down 1,897 feet on the Sadie A. Connor farm.

Washington County

In West Bethlehem Township, Washington County, George K. Gray has started drilling on the Reno Tombaugh farm. In East Finley Township, the Duquesne Gas Corp. has a rig standing on the Carter heirs farm.

In Amwell Township, Union Gasoline & Oil Corp. is drilling at 2,730 feet in No. 7 A. O. Vankirk and at 685 feet in No. 8. Carnegie Natural Gas Co. has rig on the ground for No. 4 N. B. Redd and locations for tests on the P. W. Reynolds farm and F. M. Closser farm.

In South Franklin Township, Dunn Mar Oil & Gas Co. has the rig up for No. 4 J. T. Baldwin. The South Penn Oil Co. is down 650 feet in No. 2 Piedmont Coal Co. In South Strabane Township, Manufacturers Light & Heat Co. is drilling at 2,553 feet on the R. O. McKahan farm. The Carnegie Natural Gas Co. is drilling at 56 feet on the Guthrie farm. In North Strabane Township, McClelland Brothers are down 2,364 feet on their own property.

In Nottingham Township, Robinson Brothers have reached 2,104 feet on the Frank Anthony farm. Victor D. Behm and others are shut down at 419 feet on the J. D. Amos farm. In Peters Township, the Carnegie Natural Gas Co. is drilling at 2,314 feet on the W. J. McMurray farm.

Deep Tests

The test of the South Penn Oil Co. and others on the Christian Z. Schove farm in Hampton Township, Allegheny County, is drilling at 6,175 feet with an interesting piece of correlating to work out. A shaly lime section was found at 5,938-6,042 feet, followed by shale which has not been identified. There has been no gas pockets to date.

In Washington County, after recovering the tools at 6,414 feet, Norwood P. Johnston and others cemented and resumed drilling at 6,428 feet.

In Lawrence County, the test of the Carnegie Natural Gas Co. on the W. A. Currie farm in Shenango Township is drilling at 4,580 feet or 123 feet in the Onondaga lime.

WEST VIRGINIA

Four small producers were completed in West Virginia during the week. In Ritchie County, the West Virginia Investment Co. No. 21 Joseph Parks in Grant district in Injun sand, depth 2,000 feet, is showing for 8 bbls. a day. In this district, the Devil Hole Oil & Gas Co. No. 3 Ritchie Lumber Co. is in Maxton sand and it is good for 5 bbls. a day. In Murphy district, Patterson & Pope No. 6 Harry W. Patterson, in Salt sand at 1,932 feet, is good for 10 bbls. a day along with 106,000 feet of gas. In Grant district, the Bickel Oil Co. completed a John T. Hill test in Maxton sand at 1,702 feet and it is making 5 bbls. a day and 62,000 feet of gas.

In Wetzel County, C. F. Eagan completed a test on the Melott heirs farm in Center district at 2,915 feet. Gordon sand, 2,893-2,901 feet, with 10 bbls. a day at 2,895-2,901 feet.

Gas Wells

In Braxton County, the Pittsburgh & West Virginia Gas Co. completed No. 7,611 Zalk Stump, in Birch district in Salt sand at 1,437 feet. The First Salt sand was at 1,418 feet with 700,000 feet of gas at 1,428-36 feet.

In Cabell County, United Fuel Gas Co. completed No. 4,671 J. W. Gill farm in McComas district at 3,432 feet. It produced 169,000 feet of gas per day at 1,894-1,900 feet and 2,717-3,432 feet.

In Calhoun County, the McCall Drilling Co. completed a small gas well on the J. W. Keith farm in Washington district at 2,105 feet.

In Gilmer County, the Carnegie Natural Gas Co. completed No. 1,531 G. C. Fisher in Glenville district at 1,789 feet. The Big Injun sand was at 1,688-1,780 feet with 45,680 feet of gas before shot at 1,733-77 feet. In the same district, Bush & Ferrell completed a 300,000-foot gasser on the Goff Summers farm in the Big Injun sand at 1,663 feet. In this district, Pittsburgh & West Virginia Gas Co. completed a test on the G. B. Reed farm and it is good for 600,000 feet a day in the Injun sand at 1,761 feet.

In Kanawha County, the Pure Oil Co. completed No. 276, Williams Coal Co. lease, in Cabin Creek district in the Berea sand at 2,926 feet. It is a gas well gauging 1,249,000 feet a day.

In Monongalia County, Null & Moorhead completed a gas well on the Hezekiah Barrackman farm in Battelle district at a depth of 3,652 feet. From the Big Injun and Fifth sands this well gauges 106,000 feet a day.

In Ritchie County, Phillip M. Lemon on the Icy V. Haught farm in Murphy district completed a gas well in Injun sand at 1,725 feet. It is gauging 33,624 feet a day. In Grant district, H. N. Rinehart drilled No. 9 T. E. Moore down to 1,835 feet, through Squaw sand which was dry. It is being plugged back to the Maxton sand to produce gas. In Clay district, McBurney and others drilled No. 5 M. B. Nutter through the Injun sand to 2,000 feet, and it was dry.

Oriskany Gas Field

The test of the Columbian Carbon Co. on the Mary C. Young farm in Poca district, Kanawha County, West Virginia, reported last week as a gas well, was deepened to 4,931 feet and it is now one of the largest wells in the Coopers Creek field. The top of the Oriskany was

(Continued on Page 104)

Central West

By STAFF CORRESPONDENT

RICHLAND COUNTY HAS NEW POOL NORTH OF NOBLE AREA

MATTOON, Ill., Sept. 20.—Mammoth Producing & Refining Co. has opened a pool seven miles west of Olney, Richland County, with its No. 1 Stanford SW SW NW section 34-4n-9e, the well flowing 30 bbls. of oil per hour from McCloskey sand at 2,972-3,003 feet. The new pool is north of the Noble pool.

Fitzpatrick & Myers important test, No. 1 Shannon, SW NW SE section 26-2n-8e, found water below 3,000 feet, but it also showed oil and is expected to make a producer.

There are over 50 derricks up in Clay and Richland counties and as it takes only two to four weeks to drill and complete a well in this deep part of the basin it will be seen that from now until October 15 completions will be numerous. Very fast time has been made on some drilling wells in this area. Ohio Oil Co. No. 1 Arbuthnot in Richland County was drilled to 3,000 feet in 7½ days. The first well drilled in Clay County, with cable tools, took 120 days to complete, while the second well, with rotary, was drilled in 15 days.

Outside of the capital invested in the new Illinois development by established oil companies, more Chicago money is coming into the territory than from any other financial center. It is estimated that at least $15,000,000 will come out of Chicago for Illinois leasing and exploration plays. Already a number of large financial and industrial firms have taken interests, or have supplied all the money, for tests. St. Louis capitalists are also well represented.

The Oil and Gas Journal recently named a considerable number of Kansas, Oklahoma and Texas oil men who had moved into Illinois to take part in the development of the field. Oil men from those states continue to come, and operators prominent in the Michigan Basin fields have entered Illinois, including the Gordon Oil Co., Mammoth Producing & Refining Co., McClanahan Oil Co., Gregory & Mechling, and others. J. W. Sappington, widely known Texas operator expects to drill a number of wildcats and has already assembled several blocks. Bert Stinson, who operates in East Texas, has taken two blocks around Vandalia. Joe King of Okmulgee, Okla., of Kingwood Oil Co., has tools on the siding at Effingham, and it is reported the company will start a test in Township 6n-5e. Under Mr. King's direction the company has leased about 100,000 acres in the state. The McClanahan Oil Co. of Michigan is sending in a seismograph crew to work out of Shelbyville in Shelby County. The Brindle interests of Canton, Ohio, and Pittsburgh, Pa., have a seismograph crew in the state, and the Herndon-Buell interests of Tulsa are "shooting" in Franklin and surrounding counties. The number of seismograph crews at work has grown to 18. Kirk Walker is giving Illinois a going-over for Skelly Oil Co. of Tulsa and that company is expected to join in the leasing play in the near future. Roger Bros. of Oklahoma City, represented by Tom Nix, have leased several drilling blocks. The Eason Oil Co. of Enid, Okla., represented by J. H. Van Zandt, vice president, has opened offices in Centralia and is looking over various counties.

The Carter Oil Co. is reported to have purchased 114 acres in the E half of the SW quarter of section 31-9n-4e, in Shelby County, about 40 miles north and west of the Clay City pool in Clay County.

Completions and Near Completions

Pure Oil Co. No. 1 J. H. Smith, NE NE SW section 33-3n-8e, Clay County, had St. Genevieve lime at 2,886 feet, and pay at 2,939-47 feet. It was put on the pump and made 70 bbls. of oil the first day.

The Gordon Oil Co. and others extended the Clay Center field in Clay County by completing a 1,226-bbl. initial producer, No. 1 Carroll, NE NE SE section 8-2n-8e, in sand topped at 2,995 feet, total depth 3,057 feet. Immediately the Pure Oil Co. made eight locations around this well.

Pure Oil Co. No. 6 O. Poppe, NW NW SE section 28-3n-8e, Clay County, had pay at 2,975-78 feet. It was acidized with 700 gallons and then with 1,300 gallons and later given a 4,000-gallon treatment but it made only a 105-bbl. pumper in the first 24 hours.

Pure Oil Co. No. 7 O. Poppe, SW NW NW section 27-3n-8e, had pay at 2,978-89 feet, total depth 3,000 feet. It flowed 586 bbls. in 24 hours.

Willis and others drilled a failure in No. 1 Vares, SE cor. SW section 6-1n-3w, Clinton County. It was abandoned at 1,429 feet.

Carter Oil Co. No. 1 Metzger, C W half NW SE section 4-4n-3e, a wildcat in Marion County, was abandoned at 3,671 feet. It topped St. Genevieve lime at 2,137 feet, McCloskey sand at 2,210 feet, Chattanooga shale at 3,480 feet, Devonian at 3,603 feet and uncovered sulfur water between 3,653 feet and 3,671 feet. It was the deepest test geologically that has been drilled this year in the state.

Adams Oil & Gas Co. No. 5-A Wasem, NE cor. SW NW section 28-4n-1e, in the Patoka field, Marion County, had Benoist sand at 1,409-30 feet and pumped 85 bbls. the first 24 hours. Ray Brown and others No. 1 Easton, NW cor. SE SW section 28-4n-1e, was shot with 50 quarts in Benoist sand at 1,445-53 feet and made a 45-bbl. pumper. Cypress Oil & Gas Co. No. 4-C Adams, NE cor. SW SW SW section 28-4n-1e, is a 50-bbl. pumper from sand at 1,449-55 feet. Hempen & Burgess No. 1 Rogier, NW NW SE section 28-4n-1e, pumped an initial of 80 bbls. from Benoist sand at 1,436-41 feet. Star Well Syndicate No. 1 Belcher B, NE cor. SW NE SW section 28-4n-1e, pumped 85 bbls. in 24 hours following a 50-quart shot at 1,430-51 feet. Star Well Syndicate No. 1 Nottier, SW cor. NE NE SW section 28-4n-1e, was shot with 20 quarts at 1,432-44 feet, and started at 20 bbls. a day on the pump. Adams Oil & Gas Co. No. 1 Ingles, CWL SW NE section 28-4n-1e, was a 60-bbl. completion in Benoist sand at 1,416-22 feet and the same company's No. 10 Merryman, C SW SW section 21-4n-1e, which had sand at 1,410-34 feet, made a 60-bbl. initial production on the pump.

J. D. Davis No. 1 Nugent & Rose, SE cor. NE NE SW section 21-2n-5e, a Wayne County wildcat, was dry and abandoned at 3,313 feet. It topped St. Genevieve limestone at 2,945 feet.

Pure Oil Co. No. 5 Weiler, NE NW NE section 4-2n-8e, Clay County, had Weiler sand at 2,609-24 feet and pay sand at 2,762-70 feet, swabbed and flowed 734 bbls. in 24 hours. It was not completed.

Drilling Reports

The Texas Co. No. 1 Tom Wiggins, NE NE SW section 1-3n-2e, a wildcat in Marion County, was coring at 2,106 feet after passing through Benoist sand at 1,963 feet, in which sand there was no oil showing, and through a stray sand at 2,025-40 feet, in which there was a showing of oil. H. & H. Drilling Co. was drilling at 460 feet in No. 1 Gentry, SE NE SW section 28-4n-1e. Adams Oil & Gas Co. has a near completion in No. 7-A Wasem, SE SW NW section 28-4n-1e, which had Benoist sand at 1,438 feet and set 5½-inch casing at 1,437 feet. Same company's No. 1 C. Adams, approximately in NE cor. NE SW section 29-4n-1e, was drilling at 504 feet. Same company was moving in material for No. 2 Boyd, CEL SE SE section 20-4n-1e.

In Clay County, Wiser Oil Co. made a location for No. 10 D. Smith, SW SW SW section 22-3n-8e. E. Hupp and others No. 1 Bemis, SE SE NW section 14-3n-8e, was at a total depth of 3,036 feet. It cored from 2,990 to 3,017 feet, recovering saturated and bleeding sections of core. J. V. Wicklund No. 1 McCauley, SW SW SE section 33-3n-8e, recovered bleeding sections of core between 2,981 and 2,997 feet. Gordon Oil Co. No. 1 Chicago Joint Stock Yards Bank, SE NE SE section 8-2n-8e, was drilling at 1,890 feet. Graham & Duncan No. 1 Chicago Joint Stock Yards Bank, SE SE NE section 8-2n-8e, was shut down at 270 feet for lack of water and was spudding No. 2 on the same lease, in NE SE NE section 8. Pure Oil Co. No. 1 Brissenden, SE NE NE section 8-2n-8e, was drilling at 1,527 feet. Pure Oil Co. No. 1 Schrigham, SW SW NW section 9-2n-8e, was drilling at 1,984 feet. Pure Oil Co. No. 1 Staley, NW NW SW section 9-2n-8e, was drilling at 3,041 feet, and its No. 2 Staley, SW NW SW section 9-2n-8e, was drilling at 2,643 feet. Southern Illinois Petroleum Corp. No. 1 Nodaker, NE SW SW section 23-3n-7e, was spudded. Leonard Bros. No. 1 Logge, SE SW SW section 2-3n-6e, was drilling at 800 feet. Mammoth Producing & Refining Co. was drilling at 1,500 feet in No. 1 Bemis, SE SW SE section 9-3n-8e. Wiser Oil Co. was drilling at 2,810 feet in No. 8 D. Smith, SE SE SE section 21-3n-8e. Pure Oil Co. No. 9 O. Poppe, NW NW NW section 27-3n-8e, was at a total depth of 3,010 feet. It had swabbed water with a showing of oil.

Pure Oil Co. No. 8 O. Poppe, SW NE SE section 28-3n-8e, was coring at 2,890 feet. It had penetrated pay sand at 2,972-80 feet, but had not tested. Same company's No. 2 C. Wilkin, SE SE SW section 28-3n-8e, was drilling at 1,818 feet; No. 3 Wilkin, SE SW SE section 28-3n-8e, drilling at 1,710 feet and No. 4 Wilkin, NW SE SE section 28, drilling at 2,025 feet. Wiser Oil Co. No. 6 D. Smith, SW SW NE section 28-3n-8e, was a hole full of oil from pay at 2,951 feet. While bailing it cleaned itself. Same company's No. 7 D. Smith, NE NE NE section 28-3n-8e, was drilling at 3,020 feet. It had showings in cores from 2,965 to 3,012 feet. Pure Oil Co. No. 1 A. L. Mosely, SW NE NE section 33-3n-8e, cored at 2,989-3,001 feet, but got no recovery. It was at a total depth of 3,025 feet with no oil showing. The hole will be swabbed. Same company's No. 1 D. L. Mosely, NW SE NE section 33, had the field pay at 2,972-75½ feet, total depth 2,996 feet, and the crew was preparing to swab. Pure Oil Co. No. 4 B. Travis, SE NW NE section 33-3n-8e, was drilling at 2,835 feet and No. 5 B. Travis, NE NW NE section 33, was drilling at 2,652 feet.

In Richland County, Pure Oil Co. had derrick up for No. 1 Wilson, SE SE NE section 33-4n-9e, and made a location for No. 2 Palmer-Taylor, SW SW SE section 5-3n-9e, and was rigging up rotary for No. 4 Arbuthnot, NE NE NW section 8-3n-9e. Mammoth Producing & Refining Co. No. 1 Stanford, SW SW NW section 34-4n-9e, was at a total depth of 3,009 feet with casing set, and a Schlumberger test was to be made. Keith & McMahon test in CSL SE NW section 12-3n-8e, had St. Genevieve lime at 2,982 feet and a showing of oil at 2,989 feet, total depth 3,099 feet.

Gordon Oil Co. No. 1 C. Park, SE SE SE section 14-3n-8e, set 10¾-inch casing at 300 feet. Pure Oil Co. No. 3 E. Walters, SW SE SW section 5-3n-9e, was at a total depth of 2,977 feet and was preparing to bail. Ohio Oil Co. No. 3 Arbuthnot, NE NE NW section 8-3n-9e, was acidized with 2,000 gallons and swabbed 3 bbls. of oil and some salt water. It was plugged back to 2,929 feet and the crew was rigging up standard tools. Southern Illinois Petroleum Corp. No. 1 Harry Allard, NW cor. section 16-3n-9e, was drilling at 1,040 feet. R. Neely and others were drilling in a new hole at 2,205 feet in No. 1 R. Baughman, SE SE NW section 22-3n-10e, a wildcat.

Wildcat Operations

Reports on drilling progress of wildcats more or less remote from the producing pools of the state included the following:

In Bond County, J. M. Huber Corp. No. 1 Kunz, SE NW NW section 11-6n-5w, was underreaming 10-inch pipe to 1,311 feet. Whitehead and others No. 1

Pollan, NW SE SW section 26-6n-2w, had sand at 2,411-17 feet but a hole full of water at 2,414 feet.

In Fayette County, Carter Oil Co. set 10¾-inch casing at 207 feet in No. 1 Meller, C W half NW NE section 12-8n-3e.

In Randolph County Mabee Consolidated Oil Co. and W. A. Delaney were shut down at 1,800 feet for repairs on No. 1 Wilson, C E half SE NE section 3-4s-5w.

In Pope County, C. C. Whitlock No. 1 Anthis, NW NW NE section 12-11s-5e, was drilling at 870 feet.

In Jasper County, Diamond Halff Oil Co. No. 1 Isley, C NW NW section 24-4n-8e, was drilling at 2,505 feet.

In Hamilton County, Archie H. Carpenter and others (formerly reported as Sunflower Oil & Gas Co.) No. 1 Clark, NW NW SW section 32-3s-5e, set 10-inch pipe at 190 feet and was drilling at 350 feet.

In Effingham County, Faurot, Mitchell & Hazlett were drilling at 1,320 feet in No. 1 Haarman, NE NW NE section 5-7n-6e.

In Fayette County, John Farrelly No. 1 Lilly, SE cor. SW SE section 16-8n-3e, was at a total depth of 625 feet, (corrected depth), and was cleaning out preparatory to running 10-inch casing.

In Clinton County, Bell Oil Co. had machine rigged up for No. 1 Maddox, CWL NW SW section 4-1n-3w, (corrected location).

In Washington County, Milliken and others No. 1 Lessman, NW NW NW section 36-1n-2w, was drilling at 1,225 feet.

In Jefferson County, Dee & Carter No. 1 Harvey Hamilton, total depth 2,921 feet, recemented 3-inch pipe at 2,906 feet and the crew was waiting for cement to set. This well has been acidized with 1,000 gallons.

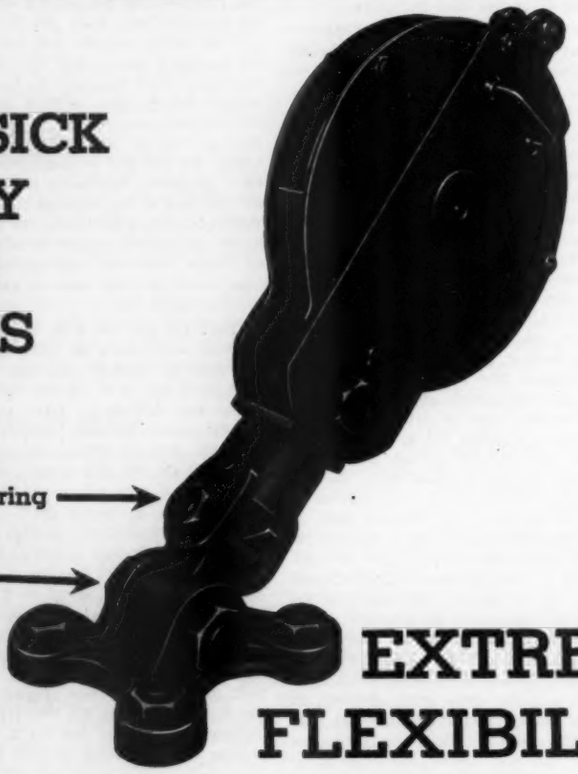
In Fayette County, Universal Well Service Co. (formerly reported as Canadian American Oil Co.) No. 1 Poor Farm, set 10¾-inch casing at 60 feet.

In Jefferson County, Carter Oil Co. made a location for No. 1 Tate, C W half NW NE section 10-1s-2e.

In Christian County, Parshall & Graham were drilling at 890 feet in No. 1 Yockey, SW SW NE section 36-15n-2w.

In Edwards County, Leach Bros. No. 1 A. D. Lee, SW NE SE section 11-1s-10e, was drilling in shale at 1,845 feet.

McKISSICK SAFETY FLOOR BLOCKS



EXTREME FLEXIBILITY

Now you may obtain McKissick's Safety Floor Blocks with Base Plate, Latch Type Becket, or UNIVERSAL ADAPTER, permitting its efficient use under any pulling condition.

SAFETY ALWAYS

To insert line remove one pin. Fully guarded to avoid accidents.

The newest development—our UNIVERSAL ADAPTER is so designed that plenty of side sway is permitted without any undue wear on the line or sheave. Ball bearing permits block to freely swivel under heaviest loads.

At Your Supply Store

MANUFACTURED BY

McKISSICK PRODUCTS CORP.
TULSA, OKLA.

OHIO

FINDLAY, O., Sept. 20.—Three new wells in northwestern Ohio should be of interest to many. In Putnam County, Brown and others No. 1 L. V. McCoulough, section 22, Blanchard Township, made 80 bbls. of oil the first 24 hours after a shot in the Trenton at 1,336-1,404 feet. In the same section, Morton Stewart Petroleum Corp. No. 3 W. D. Williams made 15 bbls. of oil from the Trenton at 1,323-1,356 feet. In section 36, Harrison Township, Henry County, M. L. Stevens No. 2 Libbie Sempsel, made 25 bbls. of oil and gauged 300,000 feet of gas in 24 hours from the Trenton at 1,682-1,742 feet. In this area, however, all eyes seem to be on the Sun Oil Co's. deep test. It is rigged up on the Charles Reinger farm, section 14, Big Lick Township, Hancock County.

In Licking County, G. H. Long's No. 1 Nathan Loper, section 14, Mary Ann Township, made 2½ bbls. of oil the first 24 hours after shot in the Berea sand at 704-714 feet. In section 14, Perry Township, Rutledge & Mossholder No. 8 Wm. Teagarden made 7 bbls. of oil in 24 hours after a shot in Berea sand at 649-661 feet. In section 9, Franklin Township, Licking Co. Wehrle Gas Co. No. 11 Benson Nethers made 2½ bbls. of oil in 24 hours after shot in the Berea at 820-831 feet. Pure Oil No. 8 Henry Loughman, section 1, Hopewell Township, was abandoned as dry in the Clinton at 2,785-2,828 feet. In Holmes County, Ohio Fuel Gas Co. No. 1 Charles Fisher, section 18, Washington Township, was a commercial gas well in the Clinton. Gas was found at 2,934-2,944 feet, in the first sand, and also in the second streak at 2,967-2,970 feet. The well was shot and shut in. It is good for 1,920,000 feet of gas. Upham Gas Co. No. 1 Hugh Banbury, section 4, Union Township, Knox County, was abandoned with only a show of oil in the Clinton at 2,785-2,828 feet.

In Muskingum County, Hopewell Gas & Fuel Co. No. 5 Aldemar Harrop, section 2, Harrison Township, was completed as a commercial gas well in the Clinton sand at 4,095-4,125 feet. The well was shut in, good for 524,000 feet per day.

In Fairfield County, Lancaster City Gas Co. No. 3 Ernest Lamb, section 33, Walnut Township, gauged 240,000 feet of gas per day from the Clinton at 2,083-2,104 feet. Rock pressure was 70 pounds.

In Perry County, Preston Oil Co. No. 157 Sunday Creek Coal Co., section 35, Coal Township, gauged 598,000 feet of gas in the Berea at 1,085-90 feet. In section 8, Reading Township of the same county, the Hopewell Gas & Fuel Co. No. 2 Michael Emmert made 431,000 feet of gas in the Berea sand at 868-870 feet. In section 11 of the same township, the Pure Oil Co. No. 3 Plus Snyder was dry in the Clinton at 3,066-3,083 feet.

In Guernsey County, Little & Sager No. 1 Carl Bowers, section 9, Wheeling Township, was abandoned as a dry hole in the Berea at 924-950 feet. Geo. Jewell No. 1 John Martin, section 5, Jefferson Township of the same county, was also abandoned in the Berea sand at 1,036-1,100 feet. The well made a small show of gas and water. In section 3 of the same township, Hayes Ferguson No. 2 Luther Kennison made 23,000 feet of gas in the Berea at 1,218-1,219 feet.

In Washington County, the Best Run Oil & Gas Co. No. 2 Jacob Best, section 27, Liberty Township, gauged 213,000 feet of gas the first 24 hours after a shot in the Germantown sand at 945-1,070 feet. In section 19 of the same township, Otto Heidman No. 5 Jennie D. Cuthbert gauged 242,000 feet of gas from Germantown sand at 925-1,070 feet. It had a rock pressure of 270 pounds. In section 21, Aurelius Township of the same county, Ed Cline No. 6 Dan Torpy was abandoned as dry in the Berea at 1,662-1,670 feet. Greenlees & Dowe No. 12 James M. Dow, in section 21 of the same township, made a small show of oil in the Berea at 1,494-1,500 feet. It was shot but gave no results. The well was drilled to the Gordon sand at 1,865-1,870 feet, but was abandoned as a dry hole. In section 27, Newport Township, Washington County, McIntyre and others No. 9 Junius Greenwood was abandoned as a dry hole. It made a small show of oil in the Peeker sand at 565-615, and was drilled on to the sand at 628-700.

In Athens County, Gross & McCune No. 3 Charles O. Lory, in section 31, Athens Township, made 3 bbls. of oil and 20,000 feet of gas in the first Berea at 1,152-1,166 feet.

In Noble County, Barnesville Development Co. No. 2

Margaret Gibson, in section 18, Beaver Township, gauged 10,000 feet of gas naturally in the Berea at 1,665-1,673 feet.

In Monroe County, Harry Dixon No. 1 James Newell, section 17, Washington Township, was abandoned as a dry hole in the Berea at 1,838-1,840 feet. It was an old well drilled deeper from the Squaw sand.

In Meigs County, J. I. Clark and others No. 2 Susie Foster, section 3, Chester Township, was abandoned as dry in the first Berea at 1,949-1,955 feet.

In Medina County, Edson and others No. 3 Clayton Billman, section 14, Homer Township, was abandoned as dry at the Berea horizon. However, no Berea sand was encountered after drilling to a total depth of 525 feet.

A small gas well and a dry hole were reported from the Lima district. J. H. Murphy and Sons deepened No. 1 Abbott in section 29, Pleasant Township, Seneca County from the Clinton sand to Trenton rock at 1,522 feet, total depth, and it is a 10,000-foot-per-day gas well. W. J. Dempsey No. 1 Chester Roberts, SW quarter section 4, Jackson Township Sandusky County, was abandoned as dry in the Trenton at 1,312 feet.

EASTERN KENTUCKY

ASHLAND, Ky., Sept. 20.—Success and failure broke even in the number of completions and dry holes in Eastern Kentucky in the past week, one of the reported completed wells was a gas producer bettering the 2,000,000 mark.

The Kentucky-West Virginia Gas Co. completed No. 555 on the Grover Jervis land, Home Branch of Buffalo Creek, Floyd County, at a total depth of 1,395 feet. The well has a daily gas production of 2,092,000 feet per day.

Two new oil wells were reported, one in Wolfe County and the other in Lee County with a dry hole also reported in each one of the counties as well as one in Martin.

Charles Brown reports the completion of No. 1 Booth heirs, on Devils Creek, Wolfe County, at a total depth of 1,500 feet with an initial production of 10 bbls. of oil. McCoun & Wissing had a dry hole on the Shelby Ross farm on Stillwater in the same county. Central States Oil Co. reports a 10-bbl. daily flow of oil in No. 5 Marion Shoemaker, at Zoe, Lee County, total depth 1,190 feet. South Penn Oil Co. drilled a dry hole at 700 feet in No. 94 Flahaven Land Co., on Big Sinking district, Lee County.

The Kentucky-West Virginia Gas Co. No. 5225 on the C. W. Preece land on Coldwater Fork in Martin County, was dry and abandoned at 1,600 feet.

Drilling operations by counties follow:

Lawrence County

McKinster Brothers have two string of tools in the hole at No. 1 E. G. McKinster on the right hand fork of little Blaine Creek. Cumberland Petroleum Co. is down 1,775 feet in well No. 13, Dennis Conley farm.

Magoffin County

The Bed Rock Petroleum Co. set casing in No. 10 W. M. Prater on Prater Fork of Mash Fork, Magoffin County. The well is down 1,007 feet. C. J. Sipple & Co. is setting up rig for No. 7 on W. M. Salyer land on Birch Branch in the Burning Fork district.

Hupp and others started drilling No. 12 on tract No. 1, B. F. White land on Rock House, also in the Burning Fork district. This will be a key well for air pressuring. A. V. Hoenig is down 450 feet in No. 9 on the L. M. Wheeler land on Litteral Fork in the Wheelersburg district. Venus Oil Corp. is cleaning out an old well on the W. H. Conley farm in the same district.

Wolfe County

Jim Hollon is idle at 2,400 feet in No. 2 George Lovelace on Trace Fork of Stillwater, in Wolfe County.

McCoun & Wissing are drilling below 400 feet in No. 1 on the William White farm at Bear Pen.

Lee County

C. E. Townsend, agent, is at the 850-foot level in No. 8 on the Andrew Combs land on Billies Fork in the Big Sinking district of Lee County. The same operator is down 370 feet in No. 9 on the same farm.

Petroleum Exploration is drilling below 690 feet in No. 7 J. D. Crabtree in Peach Tree Hollow on Little Sinking.

Knott County

The Inland Gas Corp. is drilling at 1,364 feet in Salt sand in No. 2 E. A. Hammonds, on Right Fork of Troublesome Creek, and is at the 1,317-foot mark in

(Continued on Page 114)

A NEW SCIENCE OF RUBBER MAKING

An Exclusive Development for Patterson-Ballagh Protectors

Specialization enables a manufacturer to go farther in the development of a product than can be accomplished in any plant where many articles are produced. The Patterson-Ballagh factory in Los Angeles produces one principal article—drill pipe and casing protectors. The plant was planned, machinery designed and engineers selected with special abilities to develop the world's toughest rubber for protector service. Now for ten years this plant has constantly improved its product and perhaps more than 90% of all protectors used throughout the world have been produced in this factory.

Rubber slugs are loaded into moulds and cured scientifically.

In no application is rubber subjected to such terrific abuses as in an oil well where it must protect the drill pipe and casing, rotating on a film of drilling mud and subjected to severe thrusts. The rubber must have tenacity to cling to the pipe regardless of conditions.

Milling is done on heavy rolls and chemicals uniformly distributed throughout.

Deeper drilling has added additional problems. All of the requirements of rotary well drilling have been met by the application of Patterson-Ballagh Protectors. These are not merely rings of rubber but are the result of years of costly development during which time entirely new theories of rubber structure, compounding, chemicalizing and molding have been created and from these vast experimental processes the best methods have been devised. In every step during production the rubber is tested, checked and rechecked. After curing, every Patterson-Ballagh Protector is tested for hardness in at least four places and inspected for the purpose of discovering any imperfection before release for trimming.

Premium-priced rubber crudes are used, the cost of which is approximately 25% more than certain other grades of rubber that could be used. Special chemicals are introduced during the compounding that help create an elasticity found in no other type of rubber. These are just a few of the points in manufacturing Patterson-Ballagh Protectors that make them the most enduring and result in the most economical application in the field. It costs more to produce these protectors. The service they render amounts to many times the initial cost of the product.

Adding chemicals during mixing, after which sheets are milled.

Interesting manufacturing data will be supplied upon request by addressing:

PATTERSON-BALLAGH CORP., LTD.

Plant and General Offices:
1900 E. 65th St., Los Angeles, Calif.
Mid-Continent Office: 1507 Maury St., Houston.
New York City Office: 39 Courtlandt St.

Oklahoma Operations

By
DAL DALRYMPLE

BILLINGS, LUCIEN DISTRICTS ADD BIG WILCOX PRODUCERS

Big producers in the rich Billings pool of Noble County and the Logan County extension of the Lucien field were recorded the past week, an era in which decisive developments at several Oklahoma wildcats and deep tests were delayed for various reasons. A wildcat pool opener in southwestern Hughes County was completed as a small producer.

Continental Oil Co. No. 8 Conway, SW SE NW section 21-23-2w, on the west edge of the Billings pool, one of the largest Oklahoma producers of recent months, was running tubing for potential test. It flowed 1,660 bbls. of oil in three hours with drill pipe in the hole, producing from Wilcox sand at 4,310 feet, total depth. Two other large Billings producers were the Lincoln Oil Co. and others No. 1-A O'Neil, section 16-23-2w, one-fourth mile north of production, which flowed 1,607 bbls. of oil in eight hours at 4,313 feet, total depth; and Tide Water Associated Oil Co. No. 1 Falke, section 28-23-2w, on the south edge of the pool, which had potential of 3,226 bbls. of oil.

Another good producer was near completion in the Lucien field of Logan County at Champlin Refining Co. No. 6 Pfeiffer, NW cor. section 4-19-2w. It flowed 488 bbls. of oil in three hours from Wilcox sand, total depth 5,050 feet.

Carter Oil Co. and others No. 1 Crissman, CWL SW NW section 16-25-3w, wildcat in the Lamont area, Grant County, flowed 250 bbls. of oil and 177 bbls. of water in 12 hours after packer was pulled and reset at 5,376 feet. Total depth was 5,410 feet in Wilcox sand.

E. J. Riley and J. A. Talbot of Tulsa are starting a Wilcox sand test in NW SW NW section 20-17-2e, Lincoln County. It is on a structure geologized and seismographed by the Sinclair Prairie and Transwestern Oil companies, which are supporting the test. Atlantic Refining Co. also explored the area and has a half interest in the well with Riley & Talbot, who own about 640 acres of leases in the block. The Seiboldt Drilling Co. of Cushing has the drilling contract.

Ten tracts of Indian lands in southwestern Oklahoma were sold at the lease sale at the Kiowa Indian Agency in Anadarko September 14 for total bonus and rental of $7,050.50. A total of 1,200 acres was leased. Four of the tracts were in Kiowa County in sections 15 and 22-6-15w. The remainder were in Tillman County.

Demand for crude oil from Oklahoma in October has been estimated at 629,200 bbls. daily by the Bureau of Mines, a decline of 4,400 bbls. The statewide market demand hearing for October has been set by the corporation commission for September 28 at Oklahoma City.

Wildcat Completions

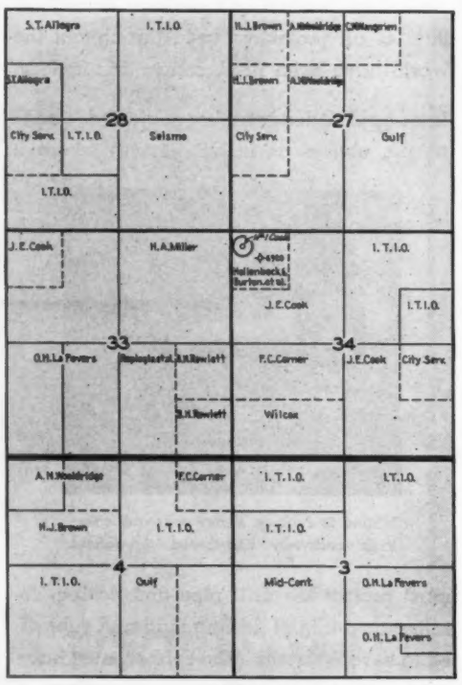
Carter Oil Co., Phillips Petroleum Co. and Ramsey Petroleum Co. No. 1 Hamilton, C W half NE SW section 33-4-9, small pool opener in the Citra area of southwestern Hughes County, was completed for potential of 60 bbls. of oil daily. It topped Hunton lime at 5,380 feet, Sylvan shale 5,474 feet, Viola lime 5,585 feet, Bromide 5,800 feet, McLish 5,945 feet, Wilcox sand 6,162 feet, total depth 6,177 feet, plugged back to 5,989 feet and was deepened to 5,994 feet. After drilling out plugs at 5,800 feet, it pumped 218 bbls. of oil net in 24 hours, with 17 per cent water. It later pumped 60 bbls. of oil with 15 per cent water in 19 hours. A total of 11,000 gallons of acid was used before completion.

Moroney & Healey No. 1 Field, C NW SW section 11-9-11, Hughes County, topped Cromwell sand at 3,515 feet, had a hole full of water at 3,540 feet, total depth, and was abandoned.

Texas Co. No. 1 Cox, NE NW NW section 23 9-8, Hughes County, had Viola lime at 4,280 feet, Dense 4,312 feet, Dolomite 4,327 feet, first Wilcox sand 4,345 feet, second Wilcox sand 4,395 feet, total depth 4,397 feet, plugged back to 4,064 feet and was dry and abandoned.

E. W. Jones and associates No. 1 Belford, NE SE NE section 9-9-8, Seminole County wildcat, formerly listed with R. S. Hughes and others as operators, had Dolomite at 4,570 feet, Wilcox sand 4,592 feet, total depth 4,596½ feet, and was dry and abandoned.

Hollenback and others No. 1 Ward, SW SE NE



Mid-Continent Map Co., Tulsa

Harry Hollenbeck and Nels Burton Drilling Co. have started work at No. 1 Clark, Wilcox sand test in section 34-21-6w, Garfield County

section 30-7-1e, Cleveland County wildcat, found second Wilcox sand at 6,918 feet and was dry and abandoned at 6,949 feet, total depth.

In Oklahoma County, Frank Buttram and associates No. 1 Cole, NW cor. section 16-14-1e, topped Sylvan shale at 5,495 feet, Viola lime 5,600 feet, Simpson formation 5,625 feet, second Wilcox sand 5,845 feet, and was dry and abandoned at 5,870 feet, total depth.

Frank Scott No. 1-A Kuntz, SE NE SE section 21-4-11w, wildcat in Comanche County, was dry and abandoned at total depth of 2,800 feet in lime.

Pontotoc County

Magnolia Petroleum Co. No. 4 Norris, NE SE NE section 21-2n-7, Fitts field, Pontotoc County, topped Hunton lime at 3,795 feet, was bottomed at 3,810 feet, flowed 246 bbls. of oil through casing in one hour and made potential of 2,225 bbls.

Fleetborn & Simpson No. 1 Newell, NW NW NE section 26-2-7, found Cromwell sand at 3,228 feet, had a junked hole at 3,520 feet, total depth, and was abandoned.

Skelly Oil Co. No. 26 Park College, SE NW NE section 28-2-7, topped Cromwell sand at 2,478 feet, total depth 2,620 feet, and flowed 102 bbls. of oil in four hours.

W. A. Delaney No. 1 Norris, NW NW SE section 18-4-8, an old well, was deepened from 700 feet to 815 feet, produced 1,280,000 feet of gas and was recompleted.

Kerlyn Oil Co. No. 1 Pratt, SW SE NE section 6-4-4, found Wilcox sand at 2,290 feet and was dry and abandoned at 2,355 feet, total depth.

New work in Pontotoc County: Crusaders, Inc., No. 2-B Morin, SW SE SE section 20-2-7, set 10¾-inch casing at 512 feet, waiting on cement at 550 feet; H. L. Blackstock No. 1-B Moody, NE cor. section 27-2-7, an old well, building rig to deepen; Skelly Oil Co. No. 29 Park College, NE SW NE section 28-2-7, drilling at 550 feet; same company's No. 30 Park College, SW NW NE section 28-2-7, set 10¾-inch casing at 508 feet, waiting on cement at 525 feet; same company's No. 31 Park College, NW NW NE section 28-2-7, drilling at 170 feet; Simpson Oil Co. and Crusaders, Inc., No. 3-B Woolley, NW NE SE section 28-2-7, location; E. H. Moore No. 9-A Schauers, NE SE NW section 29-2-7, rig; Magnolia Petroleum Co. No. 26 Simpson, NE cor. section 29-2-7, rig; W. A. Delaney No. 2 Starrett, NW SE NE section 21-5-5, location; H. & M. Drilling Co. No. 4 Harreld, SE NE SE section 29-5-8, machine.

Seminole County

Atlantic Refining Co. No. 1 West Tilghman, NE NW NW section 2-10-5, North Earlsboro area, Seminole County, topped Wilcox sand at 4,655 feet, total depth 4,663 feet, and pumped 385 bbls. of oil in 17 hours, completed.

Deep Rock Oil Corp. and Atlantic Refining Co. No. 3 Coody, SE SE SW section 9-9-7, found Gilcrease sand at 3,397 feet, total depth 3,483 feet, plugged back to 3,441 feet, was shot and flowed 25 bbls. of oil daily.

Wrightsman Oil Co. No. 1 Taylor, SE SW NE section 35-10-7, North Bethel area, had a hole full of water at 3,664 feet, total depth, plugged back to 3,585 feet, produced 1 bbl. of oil in 72 hours and was abandoned.

Sinclair Prairie Oil Co. No. 1 Yahola, SW SW NW section 28-10-8, topped Dolomite at 4,215 feet, Wilcox sand 4,244 feet, total depth 4,245 feet, was acidized and swabbed 125 bbls. of oil net and 40 bbls. of water in 24 hours.

Curtiss & Williams No. 1 Sasakwa, SE NE SE section 30-6-8, was temporarily abandoned at 1,300 feet, total depth.

Manahan Oil Co. No. 2 Williams, SE SW NE section 22-6-6, Konawa sector, had Boggy sand at 2,327 feet, total depth 2,332 feet, and flowed 120 bbls. of oil in 24 hours.

D. Malarnee and others No. 4 Flowers, SW SW SE section 29-7-6, was shot and pumped 106 bbls. of oil with some water in 24 hours from sand topped at 2,892 feet, total depth 2,921 feet.

Troup No. 2 Wright, SW NW NE section 32-7-6, found Boggy sand at 2,922 feet, was bottomed at 2,962 feet, swabbed 110 bbls. of oil in 13 hours, was shot and flowed 503 bbls. of oil in 19 hours.

Shell Petroleum Co. No. 3 Hopper, NE SE NE section 19-9-6, an old well, was deepened from 4,205 feet to 4,215 feet, was shot and pumped 55 bbls. of oil in 24 hours. Carter Oil Co. No. 1 Campbell, NW NW SW section 20-9-6, an old well, was deepened from top of second Wilcox sand at 4,239 feet to 4,250 feet, was shot and pumped 10 bbls. of oil and 80 bbls. of water in 24 hours, recompleted.

First reports of new activity in Seminole County: W. A. Delaney No. 2 Reed, NE SW SW section 12-5-7, rigging up rotary; W. B. Pine No. 1 Tiger, SW SW SE section 15-6-6, location; same operator's No. 1 Sharber, NE SW SW section 15-6-6, location; W. B. Pine No. 2 Amoson, SW SE SW section 15-6-6, location; Paul Traugh No. 3 Scroggin, NW NE SE section 22-6-6, building rig; Paul Traugh No. 2 Dotson, NW SE SE section 22-6-6, drilling at 1,521 feet; Atlantic Refining Co. No. 1 Dameron, NE NE NW sec-

New Butane Storage Tanks operate with S & J High Pressure Fittings

The Hortonspheroid, illustrated at the right, is used by Phillips Petroleum Company for the storage of butane at their Pasadena, Texas, tank farm. It is equipped with S. & J. fittings designed especially for pressure storage.

Among these new fittings is the S. & J. Automatic Tank Gauge, illustrated at the left, below, and designed especially for application to Hortonspheroids. This gauge incorporates an automatic compensator to assure an accurate reading, regardless of any slight movement of the tank roof.

At the right, below, is the new S. & J. Still Type Breather Valve, mounted above the S. & J. Flame Arrester. It was designed to operate at pressures in exeess of those encountered in low pressure petroleum storage. The lever arm is graduated for the proper pressure setting of the counterweight. The valve may also be used as a safety vent valve to protect tankage in the event of failure of other venting devices.

The S. & J. Flame Arrester is all aluminum and incorporates a removable tube bank which provides a positive fire stop without restricting the breathing of the tank. A removable cover plate affords ready access for inspection or removal of the tube bank. For maximum fire safety, an Underwriters' approved flame arrester should always be installed in conjunction with any conservation, safety, emergency or explosion relief valves.

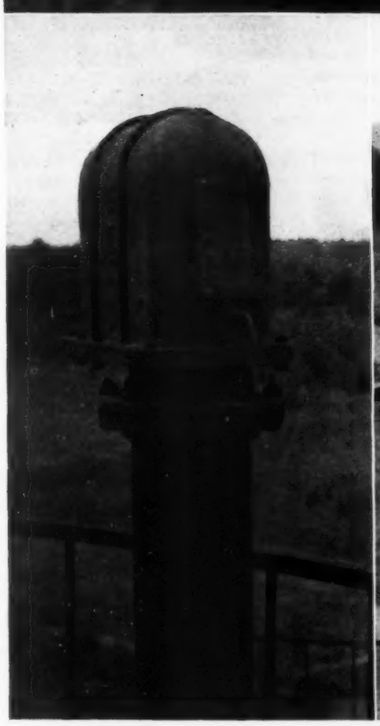
S&J

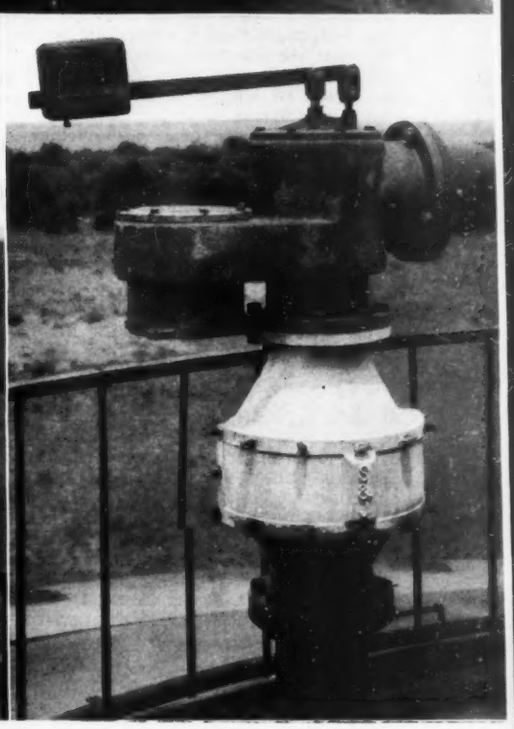
SHAND & JURS CO.
BERKELEY, CALIFORNIA

295 Madison Avenue
New York

225 W. 11th Street
Los Angeles

601 Fannin Street
Houston





At the top is a Hortonspheroid, 92 feet in diameter, having a capacity of 40,000 barrels, and designed to operate at an internal pressure of 10 pounds per sq. in.

Left, above, is the S. & J. Compensating Type Automatic Tank Gauge, designed to give a quick, accurate, and safe measurement of the contents of a Hortonspheroid.

Right, above, is the S. & J. Still Type Breather Valve, made in 3", 4", 6", and 8" sizes. It is mounted above the S. & J. Flame Arrester, which is available in 2", 3", 4", 6", 8", and 10" sizes, all of which are listed by the Underwriters' Laboratories.

SHAND & JURS

tion 22-6-6, rig; W. C. McBride, Inc., No. 1 Harbert, NW SE SW section 20-6-7, total depth 1,120 feet, shut down for water; same operator's No. 1 Gaines, SE NW SW section 20-6-7, location; same operator's No. 1 Damron, SW NE SW section 20-6-7, location; J. F. Smith No. 1 Norvell, NW SE NE section 32-7-6, rig; Mid-Continent Petroleum Corp. No. 18 Smith, SW SW NE section 5-7-7, an old well being deepened from 3,212 feet, drilling at 3,238 feet; Winona and others No. 1-A Fish, SW NE NE section 19-7-8, cellar and pits; Winona No. 2 Fish, SE NW NE section 19-7-8, location; W. C. McBride, Inc., No. 1-A Boy Scouts, SE cor. section 7-9-7, location; Sun Oil Co. No. 1 Lefka, SE NW SW section 35-11-5, rig on ground; Amerada Petroleum Corp. No. 5 Parks, NW SE SW section 35-11-5, set 10¾-inch casing at 200 feet, waiting on cement at 209 feet.

Noble County

Tide Water Associated Oil Co. No. 1 Falke, NE NW NE section 28-23-2w, Billings pool, Noble County, topped Wilcox sand at 4,332 feet, was bottomed at 4,339 feet, flowed 819 bbls. of oil in six hours and made potential of 3,226 bbls.

Sinclair Prairie Oil Co. No. 2 Glockler, NW NE SE section 32-20-2w, Lucien field, flowed 1,497 bbls. of oil in 12 hours and made potential of 2,815 bbls., with 3,200,000 feet of gas. First Wilcox sand was topped at 4,918 feet, second Wilcox sand 5,014 feet, total depth 5,125 feet.

First reports of new operations in Noble County: R. E. Eckels No. 1 Guthrie, SW NW SE section 31-21-2w, digging cellar; Lincoln Petroleum Co. and others No. 3-A O'Neil, SE NW SE section 16-23-2w, digging cellar; Continental Oil Co. No. 10 Conway, NW NE NW section 21-23-2w, rigging up rotary; Tide Water Oil Co. No. 3 Falke, NW NE NE section 28-23-2w, rig; Continental Oil Co. No. 11 Conway, SE NW NW section 21-23-2w, digging cellar; Sinclair Prairie Oil Co. No. 1 Cawood, C SW NW section 27-20-2w, an old well being deepened from 4,983 feet, drilling at 5,057 feet; Hall & Briscoe and others No. 1 Henn, SE SW NE section 32-20-2w, location.

Logan County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Knight, SW cor. section 12-17-1w, Langston area, Logan County, topped first Wilcox sand at 5,059 feet and was bottomed at 5,100 feet. It flowed 221 bbls. of oil gross in five hours, and on potential test flowed 171 bbls. of oil in six hours, making potential of 870 bbls.

Champlin Refining Co. No. 10 Pfeiffer, NW SW NW section 4-19-2w, was a location for a new Logan County test.

Oklahoma County

Sinclair Prairie Oil Co. No. 7 Stamper, SE SE NW section 30-14-2w, Oklahoma City field, Oklahoma County, was bottomed at 4,195 feet, plugged back to 4,069 feet and flowed 22 bbls. of oil in 24 hours, with 3,000,000 feet of gas, completed.

Clark & Co. No. 1 Lonsway, SW NE SW section 15-12-3w, had spudded.

Hughes County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Williams, NE NE SE section 36-9-8, Hughes County, found Misener sand at 4,004 feet, was bottomed at 4,029 feet and flowed 121 bbls. of oil in 13½ hours, completed.

Amerada Petroleum Corp. and others No. 2 Stewart, NE SW NW section 31-9-9, flowed 125 bbls. of oil in 18 hours and was completed in Misener sand at 4,050-52 feet, total depth.

Pittsburg Pipe & Supply Co. No. 1 Jonah, SE SW NW section 20-7-8, had Booch sand at 3,847-2,925 feet, total depth 2,935 feet, was shot and pumped 41 bbls. of oil in 24 hours.

Suppes & White No. 1 Bond, SW SW SE section 1-7-8, was dry and abandoned at 1,099 feet, total depth.

Potco Oil Co. No. 1 Dixon, SW NE NW section 12-9-8, an old well in the Olympic area, was deepened from 3,472 feet to Misener sand at 4,002 feet, Hunton lime 4,020 feet, total depth 4,037 feet, and produced 10 bbls. of gasoline and 11,000,000 feet of gas daily, recompleted.

Homer Doup and others No. 1 Bond, NE NE NW section 7-7-9 was a rig. It is to be a 3,000-foot test.

Pottawatomie County

Indian States Oil Co. No. 1 Goodman, NE NW NE section 5-10-4e, Shawnee pool, Pottawatomie County, topped Earlsboro sand at 4,387 feet, was bottomed at 4,430 feet and flowed 131 bbls. of oil in 11 hours.

Kerlyn Oil Co. No. 1 Ball, NW SW NW section 9-5-3e, wildcat in Pottawatomie County, was rigging up rotary. Producers, Inc., No. 5 Cardwell, NE SW NW section 15-7-4, was building rig. Magnolia Petroleum Co. No. 4 Jones B, SW NE NE section 18-7-4, set 12½-inch casing at 103 feet and was waiting on cement at 110 feet. Mudge Oil Co. No. 1 Harber, NW NW SW section 23-7-4, was a rig.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending September 18, and for the preceding week, was as follows:

	Barrels	
	Sept. 18	Sept. 11
Allen	5,425	5,450
Billings	7,625	7,275
Burbank	8,000	7,950
South Burbank	13,300	13,225
Balance Osage	21,100	21,000
Blackwell district	5,500	5,525
Bristow-Slick	7,225	7,250
Chandler	2,775	2,800
Crescent	7,950	8,000
Cromwell	3,525	3,550
Cushing-Shamrock	11,000	10,950
Duncan district	3,950	3,975
Edmond	15,500	15,500
Fish	6,475	6,675
Fitts	86,175	82,900
Jesse	3,375	3,075
Graham	4,450	4,425
Gray	1,175	1,200
Healdton	10,175	10,150
Hewitt	4,325	4,350
Holdenville	900	900
Keokuk	9,825	8,050
Konawa	1,500	1,550
Lucien	14,625	14,025
Moore	9,800	9,725
Oklahoma City	147,250	148,775
Olympic	12,100	11,750
Polo	825	850
Sasakwa and townsite	2,525	2,625
Sholem-Alechem	3,125	3,150
Seminole:		
Bowlegs	11,450	11,900
Carr City	5,125	5,275
Earlsboro	6,100	5,950
South Earlsboro	1,125	700
East Earlsboro	7,650	7,550
Little River	11,600	11,825
East Little River	1,025	1,050
Maud	750	925
Mission	2,050	2,100
Seminole	9,450	9,400
East Seminole	2,700	2,750
Searight	4,300	4,475
Total Seminole	63,325	63,900
St. Louis-Pearson	19,425	19,975
Tatums	5,450	5,475
Tonkawa-Garber-Thomas	4,700	4,725
Wewoka	3,000	3,025
Yale-Jennings	4,225	4,250
Other pools	77,550	76,525
Total Oklahoma	609,175	604,500

Pittsburg County

Utilities Production Corp. No. 1 Western, C NE NE section 18-7-18, Pittsburg County, was dry and abandoned at 2,310 feet, total depth.

J. E. Welble No. 1 Caesar, NE NE SE section 7-8-16, was dry and abandoned at 663 feet, total depth.

Osage County

Two new producers were completed in the Naval Reserve area, Osage County. Lewis Production Co. No. 7 Osage, SW NE NE section 33-24-7, topped Bartlesville sand at 2,587 feet, total depth 2,664 feet, was shot and flowed 376 bbls. of oil in 24 hours.

Lewis Production Co. No. 5 Osage, SW SE SW section 28-24-7, found Bartlesville sand at 2,569 feet, was bottomed at 2,650 feet, was shot and pumped 117 bbls. of oil in 24 hours.

Pure Oil Co. and Sinclair Prairie Oil Co. No. 176 Osage, SE NW NE section 5-23-8, Hominy area, had Chert at 2,358 feet, total depth 2,395 feet, swabbed 52 bbls. of oil in 24 hours and was completed.

Midco Oil Corp. No. 2-A Osage, SE SW NE section 18-22-10, topped Mississippi lime at 1,945 feet, total depth 1,978 feet, was shot and pumped 50 bbls. of oil in 24 hours.

H. C. Zelsman No. 4 Osage, SE NW SW section 26-27-11, was completed as a 4-bbl. well in sand at 999-1,061 feet, total depth 1,064 feet.

Link Oil Co. No. 2 Ryan, NE NE SW section 5-22-12, had a hole full of water and was dry and abandoned in lime at 2,282-2,307 feet, total depth.

Phillips Petroleum Co. No. 17 Osage, SW NE SW section 15-24-12, was completed as an intake well at 1,695½ feet, total depth.

Wolverine Oil Corp. No. 25 North Avant Unit, NE SW SE section 31-24-12, had Bartlesville sand at 1,622-1,714 feet, total depth, was shot and pumped 18 bbls. of oil and 5 bbls. of water in 12 hours, completed. Same operator's No. 51 North Avant Unit, SE SE NW section 31-24-12, pumped 16 bbls. of oil in seven hours and was completed at 1,736 feet, total depth.

New work in Osage County: Midco Oil Corp. No. 3 Osage, SW SW NE section 18-22-10, location; Lewis Production Co. No. 9 Osage, NE SW NE section 33-24-7, location; Champlin Refining Co. and others No. 2 Osage, SE NW SE section 22-25-6, was a location; Ross Oil & Gas Co. and others No. 3 Osage, NE NW NE section 27-28-10, location; same operator's No. 14 Osage, NE NW SW section 14-29-11, location.

Creek County

Strozier Drilling Co. No. 2 Anthony, SW NW SE section 12-16-11, Creek County, had Dutcher sand at 2,345-48 feet, total depth, and pumped 78 bbls. of oil and 4 bbls. of water in 24 hours.

Tulsa Oil Co. and others No. 1 Patrisic, SE SE SW section 12-19-9, had Cleveland sand at 1,148 feet, total depth 1,174 feet, and flowed 40 bbls. of oil daily by heads.

A. W. Swift and others No. 2 Hayden, NE NE NW section 13-19-9, was dry and abandoned at 2,070 feet, total depth.

Bruin Oil Co. No. 1-A Harjo, SE SE NW section 27-14-10, topped Wilcox sand at 3,290 feet, total depth 3,300 feet, and pumped 16 bbls. of oil daily.

Sinclair Prairie Oil Co. No. 1 Wallace, SE SE SW section 24-18-9, was building rig. Same company's No. 1 Whitmore, SW SW SE section 24-18-9, was a location. L. B. Jackson No. 1 Streeter, NW NW NE section 25-18-9, was a rig.

Okfuskee County

Helmerich & Payne No. 2 Robinson, NE NE SE section 26-10-10, Okfuskee County, topped Wapanucka sand at 3,209 feet, total depth 3,237 feet, and produced 18,000,000 feet of gas.

W. B. Pine No. 1 Hotolkoce, NW NW NE section 28-10-11, was bottomed at 2,884 feet, plugged back to 2,880 feet, was acidized and pumped 15 bbls. of oil daily.

Grimes & Neal No. 7 Wind, NW SE NE section 35-11-9, had sand at 1,453 feet, total depth 1,496 feet, was shot and swabbed 50 bbls. of oil in 24 hours; later, pumped 20 bbls. of oil and 21 bbls. of water daily.

Charles G. Thornton No. 1 Fixico, NE SE SW section 25-10-10, was location for a new Okfuskee County test.

Cleveland County

Sinclair Prairie Oil Co. No. 2 Holmes, SE NE SE section 28-10-2w, Moore pool, Cleveland County, flowed 1,310 bbls. of oil in five hours and 40 minutes, but was completed as a minimum well with 200 bbls. of oil daily allowable production. Gas gauged 8,000,000 feet. Second Wilcox sand was topped at 7,263 feet, total depth 7,285 feet.

Gulf Oil Corp. No. 4 James, SW NW SW section 27-10-2w, had dug cellar and pits.

Tulsa County

S. W. Anthony No. 9 Wilcox, SW NE NW NW section 3-16-12, Tulsa County, had Wilcox sand at 2,286-2,300 feet, total depth, was shot and pumped 100 bbls. of oil in 24 hours.

Somerset Oil Co. No. 3-A Murray, CNL NW NW section 36-17-12, produced 3,000,000 feet of gas daily and was completed at 1,906 feet, total depth.

Cummins Brothers No. 3 Rider, CEL NE NW section 27-17-13, had Wilcox sand at 2,026-27 feet, total depth, and pumped 30 bbls. of oil daily.

Klingensmith No. 1-A Mount, C S half S half SE section 2-16-12, topped Wilcox sand at 2,425 feet, had a hole full of water at 2,440 feet, total depth, and was abandoned.

J. D. Swift and others No. 1 Bruner, SE NE SE section 34-19-10, was drilling at 400 feet. S. W. Anthony No. 10 Wilcox, NW NE NW section 3-16-12, was drilling at 120 feet. R. E. Downing No. 1 McClaren, NE NE NW section 31-17-14, was a machine.

Okmulgee County

Lease Investment Co. No. 2 Reneau, NW SE NW section 4-13-11, Okmulgee County had sand at 3,151-85 feet, total depth, and flowed 80 bbls. of oil in 24 hours.

Barnsdall Oil Co. and others No. 1-A Wiley, NE cor. section 29-13-14, topped Wilcox sand at 2,534 feet, total depth 2,550 feet, plugged back to 1,450 feet and was dry and abandoned.

Browning & Potter No. 1-A Morton, CSL NW NW section 21-14-12, was dry and abandoned at 2,171 feet, total depth.

E. H. Moore No. 1 fee, NE NE NW section 14-14-13, had sand at 1,803-18 feet, total depth, and produced 1,700,000 feet of gas.

E. W. Ladd No. 1-A Gallagher, SW cor. section 23-14-14, had sand at 1,015-25 feet, total depth, was shot and pumped 15 bbls. of oil daily.

(Continued on Page 102)

California Field Report

IMPORTANT COMPLETIONS IN WILMINGTON AND SEGUNDO

By L. P. STOCKMAN

LOS ANGELES, Calif., Sept. 20.—Six California oil companies have completed plans to purchase the Sausal Redondo ranch comprising 1,300 acres of potential oil land approximately midway between the Playa Del Rey and El Segundo fields of Los Angeles Basin for a consideration of $900,000. The property will be bought in fee by Standard Oil Co., Union Oil Co., Shell Oil Co., Tide Water Associated Oil Co., Richfield Oil Corp. and the Texas Co. and will be given a thorough test soon after completion of present negotiations. The papers involving this joint venture are at present in escrow with the Security-First National Bank of Los Angeles and the deal is expected to be concluded within the next fortnight. The Rancho Sausal Redondo is located west of Sepulveda Boulevard and Mines aviation field and approximately 4,000 feet northwest of Ohio Oil Co.'s Gough lease in the north end of the El Segundo field and about a mile southeast of the southern end of the Playa Del Rey field. This acreage has been highly regarded by several of the principals in the pending deal, but because of the large expenditure required no one company felt justified in spending such a large amount of capital for what is at present considered wildcat acreage. At present prices the deal represents the actual value of the acreage for agricultural purposes. Tentative plans contemplate unit development of the ranch if it is found productive as a result of wildcat exploration. This acreage is generally regarded as one of the best wildcat shots in Los Angeles Basin and consequently drilling operations will be watched with considerable interest. The area, being located between the Playa Del Rey and El Segundo fields along the coast line in the western rim of Los Angeles Basin, is expected to have structural conditions similar to those existing at Playa Del Rey and El Segundo. This means that production is expected to be developed in an oil conglomerate resting directly on top of the basement Schist.

Important Completions

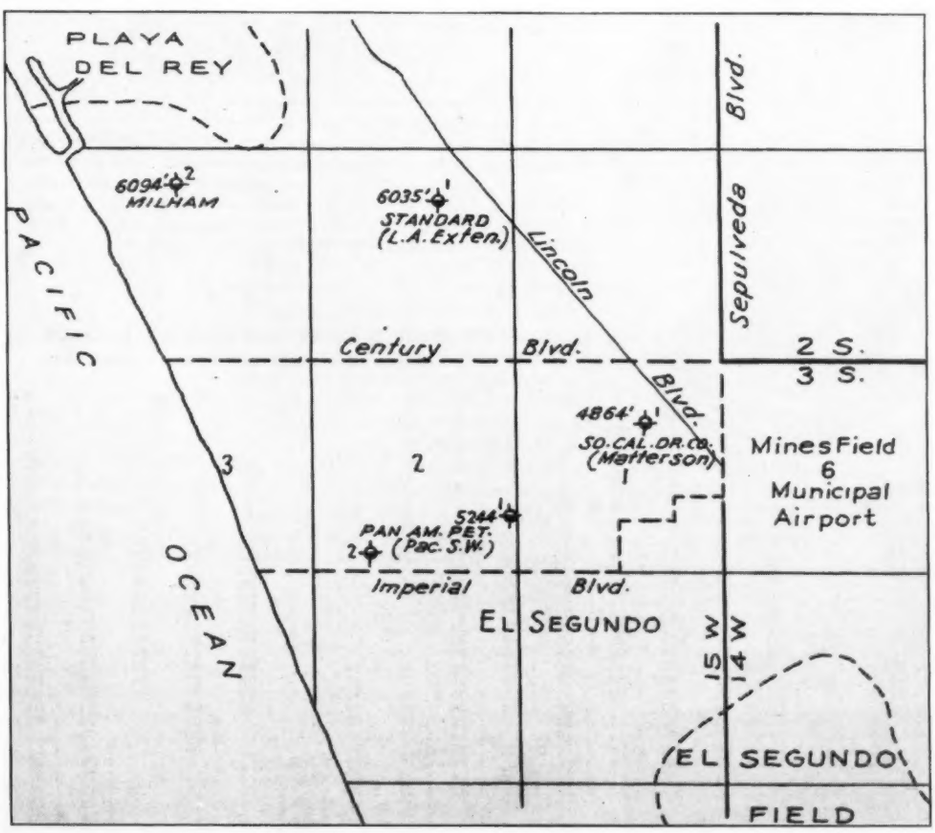
Several important completions were recorded during the past week in the Wilmington and El Segundo fields and a pending completion in the latter district is expected to open up additional acreage for development. In the El Segundo field, Ohio Oil Co. completed an exceptionally large well and extended the proven limits of the field approximately 1,000 feet northward when No. 6 Gough was brought in flowing 3,610 bbls. of clean 27.1-gravity oil and 2,700,000 feet of natural gas daily from 7,413 feet. It logged a true oil sand at 7,342-7,411 feet and topped the Schist at 7,412 feet, and was brought in flowing through a 1-inch bean and a 16/64-inch bean, with a pressure of 410 pounds on the tubing and 300 pounds on the casing. The Texas Co. No. 4 Security in the western end of the field was completed flowing 2,470 bbls. of clean 28.6-gravity oil and 3,000,000 feet of natural gas per day from 7,233 feet, but the flow continued to increase and was still building up at last report. This well has a 7-inch water string cemented at 7,106 feet, and the hole was finished with 150 feet of 5-inch perforated liner. No. 3 Security, bottomed at 7,162 feet, tested wet on a production test as the initial flow, 285 bbls. per day through a 24/64-inch bean, showed a water cut of 30 per cent. This is believed to be purely a mechanical condition, however, as the 7-inch water string froze at 7,048 feet, somewhat above the point at which it was scheduled to be landed.

South of the Texas Co.'s Security lease, Union Oil Co. found the pay in No. 3 El Segundo at 7,480 feet and preparations are being made to run and cement a 7-inch water string. This well, in the extreme western end of the Union's El Segundo lease, is running about 200 feet higher structurally than the company's well No. 1, which was finished last year flowing 750 bbls. daily. It will prove up the eastern portion of Standard Oil Co.'s El Segundo refinery land as productive. Standard Oil Co. has completed one well and is drilling two other potential producers at the northeastern corner of the El Segundo refinery close to the intersection of El Segundo and Sepulveda boulevards. Standard Oil Co. has several large reservoirs located south of where it is at present drilling but will undoubtedly provide drilling sites for additional wells if Union Oil Co. No. 3 El Segundo results in substantial production. Union Oil Co. began preparations to land a water string after the bit had penetrated 10 feet of oil sand and consequently the company may ultimately log an additional thickness of oil sand and possibly some Conglomerate on top of the Schist. Nodular shale was cored at 7,430 feet and correlates rather favorably with the point at which it was logged in adjacent wells.

Royalty Service Corp. No. 2 El Segundo was somewhat of a disappointment as it was only good for 291 bbls. of 27.6-gravity oil daily from 7,368 feet. This well failed to flow upon completion, and after having been acidized, was brought in on a compressor. George F. Getty, Inc., have decided to abandon No. 1 El Segundo, which blew out and subsequently became ignited early in the month. This gas blow-out occurred while the crew was pulling drill pipe coming off bottom from 7,119 feet. The gas, which blew out and wrecked the rig and drilling equipment, is believed to have come from a dry gas zone at approximately 1,900 feet, and is undoubtedly from the same source as that gas which blew out and junked Ohio Oil Co. No. 3 El Segundo last May while the crew was coming out of the hole from 7,094 feet. During the blowout of No. 1 El Segundo of George F. Getty, Inc., the power was cut off in Pacific Western Oil Co. No. 1 Goodwin and, as a consequence, the drill pipe became stuck. The crew has been unable to effect a complete recovery but is fishing out the drill pipe in sections. The last cut was made at 3,575 feet, which still leaves approximately 3,000 feet of drill pipe in the hole.

Wilmington

Union Pacific Railroad Co. No. 20, completed in the past week, indicates that substantial production will be developed in the Long Beach section of the Wilmington field within a short time after the Long Beach Harbor Commissioners permit development work. The well is within a few hundred feet of the line between Los Angeles and Long Beach. This well, together with substantial completions on General Petroleum Corp.'s Ford lease, tends to indicate that substantial production may also be expected on Terminal Island, which is controlled almost exclusively by Union Pacific Railroad Co., General Petroleum Corp. and Richfield Oil Corp. The last named company recently acquired a lease on the Southern California Edison Co.'s generating plant and it may be possible that Hancock Oil Co. might secure subsurface rights to the acreage containing its loading facilities. Union Pacific Railroad Co. No. 20, which continued to build up subsequent to completion, reached a



Standard, Union, Shell, Tide Water Associated, Richfield and the Texas Co. are jointly buying the Sausal Redondo ranch comprising 1,300 acres of potential oil land about midway between the Playa Del Rey and El Segundo fields of Los Angeles Basin for a consideration of $900,000. If found productive, a unit plan of development will be adopted

maximum of 7,720 bbls. of clean 26.1-gravity oil and 2,300,000 feet of natural gas per day from 4,087 feet. It is producing from the upper and lower Terminal zones at 3,200-3,553 feet and 3,607-4,087 feet. This is accomplished by packing off the upper zone and producing one zone inside the tubing and the other zone outside the tubing.

General Petroleum Corp. finished an excellent well on the Ford lease a few days ago when well No. 20 was brought in flowing 5,720 bbls. of clean 25.4-gravity oil from 4,100 feet. This well, which is producing 1,300,000 feet of natural gas daily along with the crude oil, was brought in flowing through a 1-inch bean and showed a tubing pressure of 290 pounds and a casing pressure of 400 pounds. The well is in the southern part of the Ford lease and indicates that production will be developed south of present restrictions resulting from the failure of the Long Beach Harbor Commissioners to permit actual development. The Harbor Board was recently advised that the city of Long Beach could drill wells on corporate holdings, but was prevented by the charter from leasing well sites to operators for development in the usual manner. The Harbor Commissioners are consequently holding up the enabling ordinance permitting drilling until they have completed preparations providing for development of municipally owned acreage. The Long Beach Harbor Board has mapped locations for 24 wells scattered throughout its holdings in the Long Beach section of the Wilmington field, but no definite plans have been completed as to the method to be employed in having them drilled.

Bankline Oil Co. completed two new wells in the Wilmington field in the past week, one of which, No. 1 P.T.C., was brought in flowing 810 bbls. of clean 22.3-gravity oil daily from 3,318 feet through a 22/64-inch bean under a tubing pressure of 235 pounds and a casing pressure of 620 pounds. It was finished with 736 feet of 6⅝-inch liner, including 310 feet of perforated landed at 3,314 feet. It is the best completion recorded in the immediate area. Bankline Oil Co. No. 22 D.H.C. has been completed flowing 304 bbls. of relatively clean 18.1-gravity oil daily through a 20/64-inch bean. It is bottomed at 3,342 feet and the hole finished with 324 feet of 6⅝-inch liner including 304 feet of 80 mesh. Royalty Service Corp.'s deep test in the town lot area, No. 842-2 Gilmore, which was given a production test last week, is at present flowing 296 bbls. through 40/64-inch bean under a tubing pressure of 290 pounds and a casing pressure of 450 pounds.

North Belridge

Tide Water Associated Oil Co. finished an excellent well in the North Belridge field of Kern County when No. 6 Reward in section 34-27-20 was brought in flowing 3,725 bbls. of relatively clean 31.8-gravity oil and 23,040,000 feet of natural gas per day, flowing through two 1½-inch beans under a tubing pressure of 250 pounds and a casing pressure of 1,200 pounds. It was bottomed at 8,738 feet in the Wagonwheel zone of Eocene age and the hole finished with 645 feet of 4¾-inch liner including 625 feet of perforated. The company has staked location for No. 7 Reward. Belridge Oil Co., discoverer of the productive zones in the Miocene and Eocene, is drilling four wells in this field and should finish one within the next few weeks. General Petroleum Corp. has started work on No. 1 St. Helens in section 12-28-20 in a wildcat area about midway between North and South Belridge and this work will be watched with interest. General Petroleum has leased 640 acres from St. Helens Petroleum Co. which has held the block in fee for several years. This is a geophysical shot and looks exceptionally favorable.

Kettleman North Dome

Kettleman North Dome Association (Kenda) has reached a depth of 11,090 feet in No. 4-18-J, a deep test in section 18-21-17 in the extreme western end of the field. The predominating formation has been a gray sand since passing out of the oil sand of Eocene age, logged higher up in the hole. This outpost is the first well in the Kettleman North dome field to produce crude oil and natural gas from rocks of Eocene age and this tends to indicate that a substantial part of the Kettleman North dome structure will be found productive in the Eocene. The eastern end of the Kettleman North dome structure, as indicated by the few wells drilled in that area, is not expected to be as productive as the Huffman section, located in the extreme western end of the field. The extent of the Eocene in the Kettleman North dome field is conjectural, but will in all probability become an important factor in future production, as Kenda's outpost showed a potentiality of 1,212 bbls. of 46.7-gravity oil and 19,600,000 feet of natural gas per day from 10,753 feet. The well was flowing through a 50/64-inch bean and showed a tubing pressure of 2,400 pounds and a casing pressure of 1,800 pounds. This test of the Avenal zone was conducted in July, 1937, and after the aluminum liner had been milled up, the company resumed drilling operations.

Kenda successfully completed No. 47-28-J and recompleted No. 67-28-J, in section 28-21-17. The latter well, originally completed about a month ago, flowing 751 bbls. daily from 7,877 feet, was deepened to 8,175 feet and returned to production flowing 290 bbls. of clean 36.4-gravity oil and 1,310,000 feet of natural gas per day. No. 47-28-J, a new well, was completed flowing 2,160 bbls. of exceptionally clean 36.5-gravity oil and 1,830,000 feet of natural gas per day from 8,140 feet. It was finished with 439 feet of 4½-inch liner landed on bottom and carried perforations at 7,736-7,812 feet and at 7,840-8,136 feet. In the Kettleman Middle dome field, Temblor Oil Co. of New York logged top of the Temblor at approximately 8,095 feet and is rotating ahead in a silty gray sand and shale showing slight oil cuts.

Coastal District

In the Rincon field of Ventura County Richfield Oil Co. has completed No. 2 U. S. Hobson flowing 274 bbls. of very clean 30.8-gravity oil and 195,000 feet of natural gas per day from 4,788 feet. This new well is flowing throgh a 28/64-inch bean and shows a tubing pressure of 150 pounds and a casing pressure of 650 pounds. Chansior Canfield Midway Oil Co. is grading two locations on its Hobson lease in this field where several

(Continued on Page 114)

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	September 9		September 2			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Crude oil	.....	.....	.....	.....	68,038	.....
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	.....	.....	124,892	17,842	2,836,281	4,782,663
Kerosene	.....	.....	.....	.....	328,907	888,702
Foreign exports:						
Crude oil	216,805	30,972	246,277	35,182	9,940,550	6,484,947
Fuel oil	101,670	14,524	339,549	48,507	9,828,335	7,020,894
Diesel and gas oil	98,719	14,103	470,329	67,190	5,646,911	4,120,472
Gasoline	282,750	40,393	437,388	62,484	6,062,418	5,083,271
Kerosene	.....	.....	.....	.....	1,589,462	1,043,548
Other unfinished oil	.....	.....	.....	.....	849,163	132,908
Coastwise-domestic:						
Crude oil	243,933	34,848	76,074	10,868	3,403,258	4,418,992
Fuel oil	221,482	31,640	516,171	73,596	10,700,412	6,855,316
Diesel and gas oil	14,205	2,029	67,152	9,593	1,459,680	854,941
Gasoline	322,339	46,048	455,891	65,127	10,875,758	8,666,440
Kerosene	.....	.....	.....	.....	272,401	137,977

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	227,419
Asphalt	.....	.....	.....	.....	278,026	198,297
Lubricants	.....	.....	.....	.....	22,472	38,131
Foreign exports:						
Crude oil	.....	.....	.....	.....	1,957,468	2,228,219
Fuel oil	22,697	3,242	37,482	5,355	1,577,092	1,931,981
Diesel and gas oil	.....	.....	15,160	2,166	2,239,528	1,334,870
Gasoline	.....	.....	.....	.....	3,632,308	2,425,429
Kerosene	.....	.....	.....	.....	683,076	529,323
Lubricants	.....	.....	.....	.....	425,740	244,326
Other unfinished oil	.....	.....	.....	.....	.....	90,923
Coastwise-domestic:						
Fuel oil	192,684	27,526	145,277	20,754	4,599,506	4,578,912
Diesel and gas oil	68,684	9,812	41,734	5,962	846,143	480,840
Gasoline	189,024	27,003	227,027	34,432	3,606,104	3,359,566
Kerosene	.....	.....	.....	.....	.....	102,798

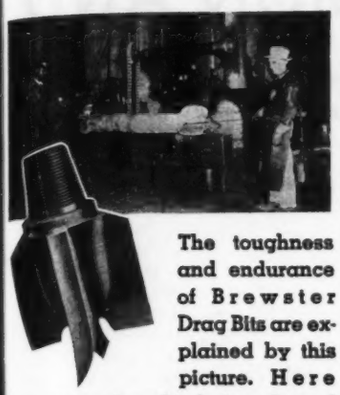
STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$ .80	$ .79	$ .74	$ .78	$ .79	$ .80	$ .76	....	....	....	$ .80	$ .76	$ .76	$ .77	$ .78	....	....	$ .70	$ .70	$ .70	....	....	$ .70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$ .70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$ .70	.74	.74	.71	$ .76	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$ .78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$ .84	$ .79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.96	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.96	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

Insist on . . .
BREWSTER FORGED DRAG BITS



The toughness and endurance of Brewster Drag Bits are explained by this picture. Here you see a drag bit being shaped and toughened under the forging hammer from a special alloy steel billet. Next it will be threaded, then dressed with Tungsten Carbide Hard Metal.

Our Drag Bit Service is the largest in the Mid-Continent Field. Take advantage of it—and save!

The BREWSTER CO., Inc.
Phone 3181 Shreveport, La.
Longview . Lake Charles . New Iberia
Houma . Rodessa . Corpus Christi

EST. 1830 WALL WALK LAID ROPE

Complete stocks of Oil Field Cordage carried in Mid-Continent and Gulf Coast Fields

WALL ROPE WORKS, Inc.
Houston, Texas
2000 Nance St. Telep. Cap. 0244

THAT THE EXPANSION RANGE OF THE **BAKER WALL SCRAPER** IS FROM **4"** TO **36"** USING ONLY **6 BODIES**

Among Gulf Coast Drilling Contractors

Nicklos Drilling Co. has opened an important new pool along the Conroe trend in Coastal Louisiana with the completion of Continental Oil Co. No. 1 Tate, in the Villa Platte area, northeastern Evangeline Parish, which is flowing at the rate of 10 bbls. of pipe line oil per hour through a three-sixteenths inch choke, with the tubing and casing pressure equalized at 2,250 pounds. Production is through perforations at 9,007-35 feet in a 60-foot sand section showing oil and gas classified as the Sparta member of the Cook Mountain horizon. The completion of this test is expected to affect the entire trend, as this is an entirely new sand for the Coastal Louisiana district. It is the deepest test drilled in that particular area, and old prospects that were condemned by shallower tests drilled to the Cockfield horizon, are expected to be retested. In the meantime two Nicklos Drilling Co. rotaries are operating at Tepetate for the same company while three others are located at Valentine field in Lafourche Parish for the Pan American Production Co.

Loffland Brothers are nearing the 12,000-foot horizon for the Continental Oil Co. at the Abbeville field in Vermilion Parish. A showing of gas has already been found at 11,629 feet and the hole is drilling below 11,800 feet. The producing horizon is expected to be encountered slightly below 12,000 feet where the company's first test attempted to blow out. This showing was never successfully tested due to mechanical trouble, caused by excessive gas pressure. For the same company at Shepherds Mott, No. 2 Hawkins is drilling below 8,530 feet in shale which is the second test on this prospect to have been drilled below 8,000 feet.

H. J. DeArman has moved his large diesel rig to the Sandy Point test, preparatory to drilling No. 1 Edmundson an outpost test which will be drilled for himself. His No. 2 Fite, just south of production, is standing cemented at 6,505 feet and a production test is scheduled to be made during the week.

Ben (Bud) Coyle has cemented a protection string of 9⅝-inch casing at 8,340 feet at D & D Oil Co. No. 2 Lutcher Moore, located on the North Starks Prospect in Calcasieu Parish. At Jeanerette No. 1 Banta-Roanes, being drilled for the Herton Oil Co., is below 10,400 feet and is reported to have encountered several good showings of oil and gas which will no doubt be tested provided no deeper sands are encountered. It is the first test to be drilled below 10,000 feet in the field and if productive, will open the fourth producing sand for the field.

George Echols has moved his rig from the Gillis field in Calcasieu Parish to the Heyser field in Victoria-Calhoun counties where he is working over his No. 2 Lander, recently completed in the 5,700-foot sand. Contract has been received from the Sinclair Prairie Oil Co. for No. 4 Bennett, while contract was received from the Westgate Oil Co. for No. 7 Miekeska at the Placedo field.

Edwards Drilling Co. has moved a rig to the Brazos River adjoining the Lockridge field, Brazoria County, for McCurdy & Johnson No. 1 State. Drilling operations continue at Dickinson for the Kenben and Turman Oil companies, the Hardin field for Woodley Petroleum Co., at Amelia and Hastings field for the Humble Oil & Refining Co.

Martin Thompson has moved in a rig to southern Wharton County for Buck & Holt No. 1 Kaener in the F. C. McReynolds in Survey A-677, which will be drilled to a contract depth of 6,000 feet.

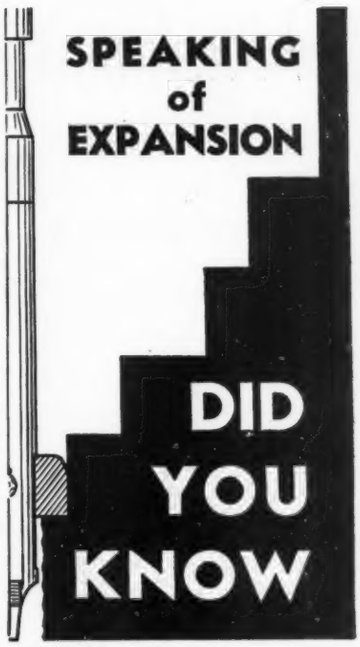
H. M. Harrel of Shreveport is moving a rig to northeastern Harris County for O. H. Medford and J. E. Burke No. 1 O. C. Pruitt, a wildcat test northeast of the Humble field in the Gilbert Brooks Survey that is scheduled to be drilled to 7,500 feet.

W. V. Bowles has completed a producer in the old Hull field for the Texas Co. No. 8 Hannah flowed 27 bbls. per hour from a total depth of 5,090 feet, while No. 9 Hannah flowed 26 bbls. per hour through a quarter-inch choke.

Of the 28 locations reported for the Texas Gulf Coast district, two were wildcats. One mile south of the South Cotton Lake area, Chambers County, Joe Lundin and others have moved a rig to the Lawrence tract in the Solomon Barrow Survey, while northeast of the Dickinson field in Galveston County, R. R. Gray and others have made location for No. 1 F. G. Eidman in the Anthony Hatch Survey. The majority of the field locations were centered around the recent north extension to the Hastings field, following the completion of Jay Simmons No. 1 Alexander. Stanolind Oil & Gas Co., the largest operator in the field, has filed application with the Railroad Commission for 32 locations, the majority of which include twin wells on the northwest side of the field.

O. W. Dyler received contract from the Atlantic Refining Co. for another test in the LaBlanca field. Hidalgo County, being No. 1 American Rio Grande. His drilling operations include four wells at the McCampbell field, while at Magnet, casing has been cemented for a production test and at Dickinson No. 2 Anderson is drilling below 7,400 feet. All are being dug for Atlantic Refining Co.

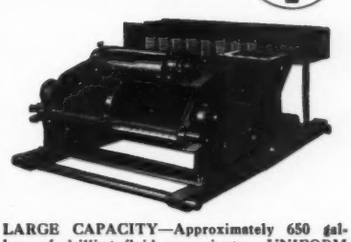
SPEAKING of EXPANSION



DID YOU KNOW

Standco NO-SMOKE
STANDCO BRAKE LINING
stands the gaff and gets the job done without scoring brake rims. See page 1636, Composite Catalog.
STANDARD BRAKE LINING CO.

McNEELY Vibrating MUD SCREEN MODEL E



LARGE CAPACITY—Approximately 650 gallons of drilling fluid per minute. **UNIFORM VIBRATION**—Advanced design insures uniform intensity of vibration over entire screening surface. **CURVED SCREEN SURFACE**—Increases capacity and prolongs screen life (Exclusive). **DIVIDED SCREEN CLOTH**—In two sections. Only one-half the cloth need be replaced at one time. Each half independently tensioned. **COMPLETELY UNITIZED**—Mud Box with integral feed and discharge ditches mounted on heavy skids, providing a completely unitized screen installation. Write for Bulletin No. 101 for complete details.

VERNON TOOL CO., LTD.
2740 EAST 37TH STREET, LOS ANGELES, CALIF.
GULF COAST AND MID-CONTINENT REPRESENTATIVE
McNEELY MATERIALS COMPANY
2935 JENSEN DRIVE, HOUSTON, TEXAS
KANSAS AND OKLAHOMA - THE BRIDGEPORT MACHINE COMPANY
EXPORT
THE NATIONAL SUPPLY CORP. • OIL WELL SUPPLY CO.

Michigan Field Report

By O. C. PRESSPRICH

IMPORTANT ROSCOMMON AND GLADWIN COUNTY TESTS DRY

SAGINAW, Mich., Sept. 20.—Two important outpost tests, one in Gladwin and the other in Roscommon County, were given up as hopeless in the past week and a third wildcat which had favorable indications two weeks ago is still awaiting acid treatment to show whether or not it will make a paying producer.

One of the failures of the week which dimmed hopes of extending production to the east of the Buckeye pool in Hay Township, Gladwin County, was F. C. Stover No. 1 Bushong, SW SE NE section 16, which went into water, and was plugged at 3,667 feet. The hole is approximately 1 mile from the section 12 development in Buckeye. It is the first day hole in Hay Township and operators are watching closely the results of four other tests in the township to prove definitely whether eastward extension of the Buckeye field is profitable or a failure.

The other failure was in Nestor Township, Roscommon County, lying immediately north of Gladwin County. It was Seger, Swan & Perkins No. 1 Barrett heirs, NE NE NE section 36. The well was dry as far as oil was concerned, yet plenty of black water was found. Indications from the Roscommon County and Hay Township wells were that the possible extension of the Gladwin County pools to the north and east of Buckeye is at least checked, if not definitely halted.

While operators pondered the possibilities of the two dry hole tests before possible further tests in unproved territory, they did not overlook the probability of opening a new Traverse pool in Arenac County.

Six miles west of Standish in Adams Township, Arenac County, Stanley Russell brought in his No. 1 Podsiadlik heirs, NW NW SE section 26. After an acid treatment the well poured out 200 bbls. a day, then settled down to about 60 bbls. steady flow. The well was reported bottomed in the Traverse lime at about 2,100 feet. The Russell well is three locations west of E. H. Linabury's discovery, another Traverse well, and is reported better than the discovery well. Possibilities of a new Traverse field appear bright to operators, with the favorable development of the second well in the same territory. The probable new field is located 8 miles south of the Clayton field in Arenac.

Back in Gladwin County, in a remote southeast corner, speculation still was rife as to possibilities of Harold J. Hind's No. 1 Hoyt-Smart wildcat, C NE NW section 29. Two weeks ago the well appeared a favorable development; today even future operations at the well are in doubt. After an acid shot results still were uncertain, as the well took only a portion of the acid, made a few heads, then ceased to flow. While decision on future action was being awaited, it was believed the well would be deepened and another acid treatment given.

Thus developments of the week were diversified, and forced attention in several sections, although Buckeye continued to hold the spotlight with results continuing to increase production in Michigan.

North (Wicklund) Pool

Important and topping the honor list of the week was a development in the eastern section of the North Buckeye pool, in section 12, a truly eastern extension.

Cryden & Rowmor Corp. No. 3 Shaffer, NE SW SW section 12, developed an initial flow of nearly 2,000 bbls. daily in the first pay of the Dundee, where previous wells in the vicinity made only light flows. The Shaffer well topped the Dundee at 3,550 feet, hit the pay at 3,595 feet, and bottomed at 3,600 feet. The upper pay was about 18 feet higher than where previous wells struck slight shows, and continued on to the loose pay. Operators were enthusiastic over the unexpected results, and indicated that they did not expect to deepen the well at present to the lower pay. The well is seven locations east of the discovery well in the Wicklund pool, and one location north.

West from the Cryden & Rowmor discovery, Charles W. Teater added another producer for the North field with his No. 3 Adamets, SW NW SW section 12. The well came in for 700 bbls. daily after acid.

Wicklund Development Co. added a producer on its state leases with its 1-K State, SW SW SE section 3, a northern outpost of the North pool, now on the fringe of development which has extended both northward and westward beyond it. The 1-K State was reported to have made 500 bbls. initially. The Sun Oil Co. also added to its production on the Ockerman lease with No. 4, NW NE SW section 10, which was a 500-bbl. producer.

Western development of the North field was being watched closely, with interest centered in D. F. Jones No. 2 Bonnigot, NW NW SW section 10, which failed to show as expected after a 2,000-gallon acid treatment. It will be reacidized.

Rex Oil & Gas Co. expected a producer from its No. 5 Jacob, SW NE NW section 11, the discovery section, with more than 2,800 feet of oil in the hole, and acid treatment ordered.

South (Oard) Pool

A record acid shot for Michigan oil pools was established when Schelling & Schrott No. 2 Nash, NE NW SE section 35, took 6,000 gallons and responded with a flow which operators claimed exceeded 200 bbls. in a two-hour gauge. The large acid dose was recommended after tests had been made of the structure from which the well logged 1,000 feet of oil in the hole. Previously a 5,000-gallon acid shot was the largest for any Michigan field.

Three other wells were brought into production in section 26, as northwesterly extensions of the South pool. They were Smith Petroleum Co. No. 2 Foster, SE NW SE section 26, which came in with 50 bbls. natural flow; Swanson-Big Three No. 4 Fritzwater, SE NE SE section 26, a 50-bbl. natural producer, and the same company's No. 3 Fritzwater, NE NE SE section 26, which was indicated a favorable producer, and was ready to be acidized. Down in section 36 Garfield Petroleum Co. No. 4 McMahon came in with 150 bbls. natural production, and Rex Oil & Gas Co. No. 1 Arkwright, in section 35, was reported ready for casing on top of the Dundee, preparatory to drilling in.

While oil wells continued to be brought in in both the North and South pools, activity was reported more apparent in the so-called "Midway" field. The Midway pool, discovered by Hanners Development Co. No. 1 Armstrong, the "tattle-tale" well in section 23, now has 10 wells drilling, all of which are expected in within the next three weeks. Operators are reported watching closely the developments in the Midway field, which has proved its connecting link with the South (Oard) pool, but so far has failed to establish a connecting link with the North (Wicklund) pool.

Arenac County

Gordon Oil Co. No. 1-B State, SE NE NE section 2, Adams Township, Arenac County, was completed dry in the Dundee, and abandonment orders were issued. A small oil showing was found but the well failed to rate commercially. In another section of Adams Township, however, a new Traverse pool was indicated by the second producer in section 26.

Allegan County

The Allegan-Salem field continued to develop with Allegan Crude Oil Co. No. 1 Hardy, NW NW NE section 21, coming in with an initial of 55 bbls. an hour before being pinched in.

Missaukee County

After a year of hard luck Rex Oil & Gas Co. No. 1 Meekoff, NE NE SE section 30, Clam Union Township, was slated for abandonment after hitting water in the Dundee. Started in September, 1936, the well was retarded first when drillers hit between 800 and 900 feet of glacial drift. The rig was skidded twice, and a rotary rig was brought in to restart the well. After numerous fishing jobs and collapsed pipe had added to troubles, the cost of the well was estimated at $60,000.

Isabella County

Pure Oil Co. added three producers to its holdings in Isabella County, in the Broomfield and Sherman pools. No. 1 Embrey, NW NW NW section 3, Broomfield Township, was bottomed in the Monroe formation at 3,613 feet for a production of 203 bbls. daily after acid. The well rated 150 bbls. naturally. No. 7 Wille, NW NE NE section 4, Broomfield Township, developed Monroe production at 3,623 feet for an initial of 170 bbls. naturally. The same company No. 5 Latham, NE SW SE section 33, Sherman Township, was completed in the Monroe at 3,653 feet with a 278-bbl. natural flow.

Midland County

A small Dundee producer rating about 80 bbls. was reported by Pure Oil Co. in Jasper Township, Midland County. It was the 1-C Bond in the C S half NW SE section 12, which was completed in the Dundee at 3,432 feet.

Tuscola

Plans for deepening of the Arbela Township oil test in Tuscola County, which found salt water in the Dundee limestone at a depth of 2,570 feet, have been abandoned because of the cost. The hole, on the Dalrymple farm, will be plugged and abandoned.

Two other Tuscola County tests are in progress, on the Clarence Voorhees farm in C NW SW section 8, Kingston Township, and in SE NW SW section 24, Wisner Township, on the Archie Boyce farm. The lessee in the Kingston test is Frank Norton, while the Wisner Township well is being put down by Jaenicke Oil Co. and Brehm-Hollman Oil Corp.

Drilling in Five Counties

The weekly list of drilling permits issued to oil and gas operators by the Michigan conservation department showed 15 licenses in five counties, seven in Gladwin, four in Allegan, two in Tuscola and one each in Arenac and Ogemaw. The Buckeye region of Gladwin County took five of the permits, with single tests also scheduled in Billings and Gladwin Townships, both nearby the proved Buckeye Township field. Three of the Allegan County permits were for wells in Salem Township's proved field, but the fourth announces an attempt to make a wide extension of that field by a test on the Morgenstein lease in NW NW SW section 1, Hopkins Township.

The one Arenac County permit is for a well in the borders of the Clayton Township pool, while that in Ogemaw County is on the edge of the West Branch development.

State Land Sale

Another big lot of state-owned acreage is to be thrown open for oil development next month, mostly in Roscommon County, scene at the moment of several wildcat ventures. The state conservation department has announced for 10 a.m. Friday, October 8, at its Lansing office, an auction of mineral rights under more than 35,000 acres of land which has reverted to the state in years past because of nonpayment of taxes.

Approximately 23,000 acres of the October 8 acreage is in Roscommon County, with the remainder scattered throughout Gladwin, Ogemaw, Arenac, Bay, Osceola and Wexford Counties.

Rocky Mountain Area

By
T. R. INGRAM

TEXAS PACIFIC HAS 20,000 BBL. WELL IN SOUTH EUNICE

DENVER, Colo., Sept. 20.—Two wells to test out possible northwest extension of the Gramps No. 1 pool in Archuleta County, Colorado, are getting under way. Stanolind Oil & Gas Co.'s test on the Gypsum Creek structure in Eagle County was abandoned at 1,000 feet. Roaring Fork Oil Co. No. 1 Patterson, on the Roaring Fork structure in Garfield County, had an important oil showing in the Pennsylvanian and will test. Mountain Fuel Supply Co.'s Shell Creek wildcat in Moffat County penetrated the Wasatch without results and will be abandoned.

In Wyoming, the Woods-Callahan, Ltd., test on the Paintrock structure in Big Horn County had water in the Madison and was abandoned. The Texas Co. completed a small well in the LaBarge field, one well was abandoned in the Hidden dome area and the Osage field had three dry holes. Italo Petroleum Corp. had gas shows at shallow depth in well drilling for water in Sweetwater County.

Cut Bank in Montana had three completions, one a 10,000,000-foot gasser, and one new operation. The Tarrant test in the old Devil's Basin field missed the pay and was abandoned. Kevin-Sunburst had five completions and one new operation.

NEW MEXICO

The South Eunice area of Lea County held the spotlight in New Mexico the past week with a well that was estimated good for 20,000 to 25,000 bbls. of oil daily. It was Texas Pacific Coal & Oil Co. No. 5-A State, C NE NE section 7-22-36. After flowing wild over the derrick, it gauged 1,150 bbls. of oil in one hour through open casing and tubing, with a maximum gas volume of 23,000,000 feet. It was estimated the well would flow 1,500 bbls. of oil an hour if adequate equipment was available. It was bottomed at 3,782 feet, but had not been completed.

Texas Co. No. 2 Weir, C SE SW section 23-19-36, on the west side of production at the north end of the Monument pool, flowed 30 bbls. of oil through three-quarters inch choke on tubing the first hour after cleaning itself into pits for two hours following acid treatment. Production later declined and it was expected to be re-acidized. Total depth is 3,750 feet in lime. It was not completed.

About 1 mile southwest of the Weir well and also extending Monument production, Cities Service Oil Co. No. 1 Persons, C SE SE section 27-19-36, was completed at 4,002 feet, total depth. It flowed 35 bbls. of oil daily with flow valves in tubing. Top of pay was 3,875 feet.

Other Lea County completions: Continental Oil Co. No. 1-B-30 Lockhart, SW section 30-21-36, topped pay at 3,790 feet, total depth 4,101 feet, plugged back to 3,936 feet and produced 3,000,000 feet of gas.

Gulf Oil Corp. No. 1-B Bell Ramsey, SW section 29-20-37, pay 3,740 feet, total depth 3,840 feet, pumped 6 bbls. of oil daily.

Herschback Drilling Co. No. 1 Crutchfield, SW SE NE section 32-19-37, pay 3,850 feet, total depth 3,909 feet, acidized, flowed 186 bbls. of oil through tubing in 24 hours.

Shell Petroleum Corp. No. 1-L State, NE NE SE section 1-21-35, flowed 352 bbls. of oil in 24 hours through tubing from pay bottomed at 3,850 feet, total depth 3,874 feet.

Skelly Oil Co. No. 1 Baker, C NW NW section 26-22-37, pay 3,470 feet, total depth 3,705 feet, acidized, flowed 84 bbls. of oil through 1-inch choke in 24 hours.

Skelly Oil Co. No. 1 Grizzell, C SW NE section 6-22-37, was acidized and flowed 96 bbls. of oil through choke in 24 hours. Top of pay 3,650 feet, total depth 3,800 feet.

Stanolind Oil & Gas Co. No. 6-A Gilluly, C NE SW section 25-20-36, had pay at 3,745 feet, total depth 3,854 feet, acidized, flowed 1,372 bbls. of oil through tubing in 24 hours.

Stanolind Oil & Gas Co. No. 7-A Gilluly, C SW SE section 24-20-37, pay 3,750 feet, total depth 3,858 feet, acidized, flowed 1,800 bbls. of oil through tubing in 24 hours.

Stanolind Oil & Gas Co. No. 2 State, C SW SE section 2-21-36, was acidized and flowed 156 bbls. of oil through choke in 24 hours; pay 3,754 feet, total depth 3,834 feet.

In Eddy County, Nash-Windfohr & Brown (formerly Flynn- Welsh & Yates) No. 3-A Stevens, C SE NW section 13-17-30, responded to acid treatment by flowing 526 bbls. of oil through tubing in 24 hours. Pay was topped at 3,445 feet, total depth 3,500 feet.

Same operator's No. 2-A Stevens, C NW SW section 13-17-30, topped pay at 3,405 feet, total depth 3,497 feet, was acidized and flowed 265 bbls. of oil in 24 hours through tubing.

Tignor, Etz & Keyes No. 2-B Keyes, NW section 10-17-28, produced 4,000,000 feet of gas from pay topped at 1,362 feet and was completed at 1,387 feet, total depth.

Franklin Petroleum Co. No. 1 Nelson, NW section 4-18-30,. wildcat, was bottomed at 2,953 feet, plugged back to 2,906 feet and was dry and abandoned.

Lea County

Amerada Pet. Corp. No. 6 Byrd, SE sec. 12-20-36. Loc.
Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. T.D. 2,585 ft.; set 8-in. 2,573 ft.
Amerada Pet. Corp. No. 2-G State, C NW SW sec. 18-19-37. Drlg. 1,264 ft.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Drlg. 3,575 ft.
Anderson-Prichard Oil Corp. No. 1 Gregory, NW sec. 33-25-37. T.D. 3,120 ft.; W.O.C.
Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. T.D. 3,466 ft.; testing.
Anderson-Prichard Oil Corp. No. 3 Langlie, NE sec. 8-25-37. Loc.
Anderson-Prichard Oil Corp. No. 1-D Langlie, NE sec. 8-25-37. Loc.
Anderson-Prichard Oil Corp. No. 1 Lanehart, SW sec. 21-25-37. T.D. 2,903 ft.; est. 25,000,000 ft. gas; trying to kill.
Atlantic Ref. Co. No. 2-P State, C NE NW sec. 25-20-36. Drlg. 3,745 ft.
E. G. Bradley No. 1 Lanehart, C SW NE sec. 28-25-37. T.D. 3,221 ft.; testing.
Bradley Oil Co. No. 1 Grizzell, C SW NE sec. 5-22-37. Drlg. 380 ft.
Cities Service Oil Co. No. 6-A Clossen, C SW SE sec. 6-22-36. Drlg. 2,740 ft.
Cities Service Oil Co. No. 1-H State, C NE NE sec. 17-22-36. T.D. 3,884 ft.; to acidize.
Continental Oil Co. No. 7 Britt, C SW SE sec. 18-20-37. T.D. 3,878 ft.; F. 3 bbls. oil hourly.
Continental Oil Co. No. 1-B-10 Britt, SW sec. 10-20-37. Cellar and pits.
Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat; P.B. from 3,860 to 3,672 ft.; boiling.
Continental Oil Co. No. 2-A-15 Elliott, SE sec. 15-22-37. T.D. 3,675 ft.; testing.
Continental Oil Co. No. 1 Jack, C NW NE sec. 27-34-37. T.D. 3,550 ft.; F. 315 B.O. in 12 hrs.
Continental Oil Co. No. 6-A-30 Lockhart, NW sec. 30-21-36. Drlg. 3,443 ft.
Continental Oil Co. No. 2-B-31 Lockhart, C SE SW sec. 31-21-36. T.D. 3,775 ft.; set 5½-in. at 3,774 ft.
Continental Oil Co. No. 3-B-31 Lockhart, SE sec. 31-21-36. Cellar and pits.
Continental Oil Co. No. 6 Lockhart, NE SE NW sec. 30-21-36. T.D. 294 ft.; set 10¾-in. csg. at 286 ft.
Continental Oil Co. No. 3-B-10 Sanderson, NE NE SE sec. 10-20-36. T.D. 3,780 ft., W.O.C.
Continental Oil Co. No. 6-A-11 Sanderson, NE SW SW sec. 11-20-36. T.D. 3,744 ft.; W.O.C.
Continental Oil Co. No. 3-A-14 Sanderson, NE section 14-20-36. Cellar and pits.
Continental Oil Co. No. 1-E-17 State, C SE SE sec. 17-22-36. T.D. 3,842 ft.; shut in for storage.
Continental Oil Co. No. 1-A-30 Warren, C SE NW sec. 30-20-38. Drlg. 3,157 ft.
Crandall, Osmond & Maxwell et al No. 1 Maxwell Permit, C SE SE sec. 2-11-36. T.D. 2,351 ft.; W.O.C.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,210 ft.; S.D.O.
Culbertson & Irwin No. 2-A Humphrey, NE NE NW sec. 3-25-37. Drlg. 1,250 ft.
Culbertson & Irwin No. 3-A Humphrey, NE SW NE sec. 3-25-37. T.D. 1,170 ft.; setting csg.
Culbertson & Irwin No. 2 Moseley, NE NW SW sec. 34-24-37. S.D. 2,970 ft.; fishing.
Emperor Oil Co. No. 1 Johns, C SW NW sec. 24-17-32. Drlg. 2,530 ft.
Empire Oil & Ref Co. and Repollo Oil Co. No. 2 Brunson, NW sec. 3-22-37. Drlg. 3,410 ft.
Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; shut down.
Empire Oil & Ref. Co. No. 2-B State, C SE SW sec. 2-21-37. Drlg. 3,850 ft.
J. E. Farrell No. 2-B Walden, C NE SW sec. 15-22-37. T.D. 3,704 ft.; pulling tubing.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.
Great Western Prod. Co. No. 1 Bordages, NW cor. sec. 33-19-37. Drlg. 3,510 ft.
Gulf Oil Corp. No. 2 Baker, SE sec. 5-22-37. T.D. 3,735 ft.; swb. 105 B.O. in 24 hrs.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.
Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; shut down.
Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Drlg. 3,380 ft.
Gulf Oil Corp. No. 2-H Graham, C SW SW sec. 13-20-36. T.D. 3,770 ft.; W.O.C.
Gulf Oil Corp. No. 1 Kyle, C SE SE sec. 7-19-37. Drlg. 3,757 ft.
Gulf Oil Corp. No. 3-C Kutter, NW sec. 18-19-37. Derrick.
Gulf Oil Corp. No. 1 Mattern G, C NE SE sec. 18-21-37. T.D. 3,563 ft.
Gulf Oil Corp. No. 1 Monda, C SE SW sec. 21-22-37. T.D. 3,670 ft.; flowed 43 bbls. oil per day.
Gulf Oil Corp. No. 2 Reeves, C SE NW sec. 29-20-37. T.D. 3,840 ft.; running tubing.
Gulf Oil Corp. No. 1 Stebbins, C SE NW sec. 5-22-37. T.D. 3,760 ft.; running tubing.
Gulf Oil Corp. No. 1 Stitcher, C SE SW sec. 4-22-37. Drlg. 3,440 ft.
Gulf Oil Corp. No. 2 Stuart, C SE NW sec. 10-25-37. T.D. 3,320 ft.; P.B. 1,978 ft.; to whipstock.
Gulf Oil Corp. No. 1-B White, SE sec. 35-20-36. Derrick.
Homestead No. 1 Clifford, SW sec. 12-26-32. Wildcat; drlg. 3,810 ft.
Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 3,185 ft.
Humble O. & R. Co. No. 2 Saunders, C NW NW sec. 9-22-34. T.D. 3,711 ft.; fishing.
Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. T.D. 3,029 ft.; testing.
Landreth Prod. Co. No. 4 Grizzell, C SW SW sec. 5-22-37. T.D. 3,780 ft.; running tubing.
Mack & Stauffer No. 2 Grizzell, C NE NE sec. 8-22-37. Drlg. 3,395 ft.
Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 29-21-37. Drlg. 3,474 ft.
Magnolia Pet. Co. No. 1 Hardy, SW SW NW sec. 29-21-37. T.D. 3,625 ft.; W.O.C.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 34-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.
Magnolia Pet. Co. No. 2 State-Bridges, sec. 14-17-34. Drlg. 4,521 ft.
J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-33. Wildcat; T.D. 470 ft.; shut down.
McDonald & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. Drlg. 2,490 ft.
Mid-Continent Pet. Corp. No. 4 Greer, C SW NW sec. 21-22-36. T.D. 3,760 ft.; W.O.C.
Murray et al No. 4 State Wallace, NW SW NW sec. 3-21-36. T.D. 3,840 ft.; to deepen.
National Drlg. & Prod. Co. No. 1 Flint, C NE NE sec. 29-20-34. Wildcat; drlg. 3.588 ft.
Ohio Oil Co. No. 2 Grizzell, C NW SE sec. 5-22-37. Drlg. 3,411 ft.
Ohio Oil Co. No. 1 Kutter D, C SW SW sec. 8-19-37. Drlg. 3,535 ft.
Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,871 ft.; cleaning out.
Ohio Oil Co. No. 9 State McDonald, SW sec. 16-22-36. Location.
Ohio Oil Co. No. 2 Turner, SW NW SE sec. 29-21-37. T.D. 3,792 ft.; drlg. by bit.
Phillips Pet. Co. No. 1 Lea, C NW NW sec. 30-17-34. Wildcat; T.D. 4,952 ft.; shut down.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Repollo Oil Co. No. 1 Carter, SW SE NE sec. 8-24-37. Drlg. 3,120 ft.
Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. T.D. 3,600 ft.; cleaning out.
Repollo Oil Co. No. 4 Roach, NW NW SW sec. 21-20-37. Drlg. 2,664 ft.
Repollo Oil Co. No. 1 Turner, sec. 29-21-37. T.D. 3,800 ft.; flowed 66 bbls. oil in 24 hrs.
Repollo Oil Co. No. 2 Moseley, NE SE SW sec. 34-24-37. Drlg. 3,005 ft.
Repollo Oil Co. No. 1 White, SE NE SE sec. 35-20-36. Drlg. 2,680 ft.
Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 3,665 ft.; cleaning out.
Rowan Drlg. Co. No. 1 Elliott B, C NE NW sec. 9-22-37. Drlg. 2,865 ft.
Rowan Drlg Co. No. 2 Elliott B, C NW NW sec. 9-22-37. Drlg. 1,200 ft.
Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37. Derrick.
Rushwold Oil Co. No. 1 Mattix, NE sec. 10-24-37. Cellar and pits.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.
Schermerhorn Oil Co. No. 2 Woolworth, sec. 29-24-37. T.D. 3,577 ft.; testing.
Shell Pet. Corp. No. 3 Black, SE SE SW sec. 21-24-37. Drlg. 1,610 ft.
Shell Pet. Corp. No. 4-E State, C SW NW sec. 12-20-36. Drlg. 3,494 ft.
Skelly Oil Co. No. 5 J. B. Baker, C SE NW sec. 27-22-37. T.D. 3,620 ft.; testing.
Skelly Oil Co. No. 1 Hill, C Lot 7, sec. 6-21-37. T.D. 3,870 ft.; P.B. 3,790 ft.
Skelly Oil Co. No. 3 E. Sims, C SE SE sec. 2-23-37. T.D. 3,320 ft.; set 7-in. csg.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. T.D. 3,642 ft.; cleaning out.
Skelly Oil Co. No. 4 G. W. Sims, C NW NW sec. 10-23-37. Drlg. 3,585 ft.
Skelly Oil Co. No. 1-C R. R. Sims, sec. 3-23-37. Drlg. 3,622 ft.

Skelly Oil Co. No. 6 R. R. Sims, C SW SW sec. 3-23-37. T.D. 3,320 ft.; waiting on tools.
Skelly Oil Co. No. 1-E W. P. Sims, C SW NE sec. 10-23-37. T.D. 3,625 ft.; flow. 452 bbls. in 24 hrs.
Southern Pet. Explo. Co. No. 1 Rinewalt, C NW NW sec. 4-22-37. T.D. 3,570 ft.; W.O.C.
Stanolind O. & G. Co. No. 26-A Farnsworth, C SE NW sec. 18-26-37. T.D. 3,146 ft.; P.B. 3,185 ft.; W.O.C.
Stanolind O. & G. Co. No. 8 Gilluly A, C NW SE sec. 24-20-36. Derrick.
Stanolind O. & G. Co. No. 9-A Gilluly, C NE NW sec. 24-20-36. Preparing to spud.
Stanolind O. & G. Co. No. 1-B Hill, NE sec. 6-21-37. Loc.
Stanolind O. & G. Co. No. 2-B Langlie, C NW NW sec. 15-25-37. T.D. 3,458 ft.; water 3,456 ft.
Stanolind O. & G. Co. No. 1 State, C SE SE sec. 2-21-36. T.D. 310 ft.; running csg.
Stanolind O. & G. Co. No. 1 Thompson, NE sec. 6-21-27. Loc.
W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. C.O. at 3,383 ft.
Texas Co. No. 2 Weir, C SE SW sec. 23-19-36. T.D. 3,754 ft.; testing.
Texas Pacific C. & O. Co. No. 5-A State, sec. 19-22-36. T.D. 3,782 ft.; running tubing.
Texas Pacific C. & O. Co. No. 6-A State, Acct. 2, NE sec. 7-22-36. Loc.
Tide Water Oil Co. No. 4-J State, C NE NW sec. 17-19-37. T.D. 3,912 ft.; running 7-in.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. Drlg. 3,880 ft.
Woodley Pet. Co. No. 2 Cooke, C SE SE sec. 28-25-37. T.D. 3,284 ft.; testing.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; shut down.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. Drlg. 1,330 ft.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. T.D. 738 ft.; S.D. for csg.
Carper Drlg. Co. No. 2 Geissler, SW SE NW sec. 23-17-30. Drlg. 2,250 ft.
Cities Service Oil Co. No. 1 State, CSL SW SE sec. 16-17-30. T.D. 2,534 ft.; running 7-in.
T. D. Collins No. 1 Weller, C NW NW sec. 13-24-36. T.D. 1,970 ft.; P.B. 1,965 ft.; S.D.
Continental Oil Co. No. 1 Barret, SE sec. 14-20-30. Drlg. 2,050 ft.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. T.D. 3,175 ft.; set 7-in. csg.
Emperor Oil Co. No. 3 Puckett, C NE NW sec. 24-17-31. Drlg. 2,780 ft.
Finley & Cherry No. 1 Buchley, C NW NW sec. 28-16-31. Wildcat; drlg. 1,077 ft.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,800 ft.
C. J. Frederick No. 1 Reed, C NE SW sec. 28-24-28. T.D. 95 ft.; S.D., repairs.
F. W. & Y. Oil Co. No. 7-A Gissler, SE sec. 14-17-30. Loc.
F. W. & Y. Oil Co. No. 8-A Gissler, NE sec. 23-17-30. Loc.
F. W. & Y. Oil Co. No. 1-B Gissler, SW sec. 14-17-30. Loc.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,953 ft.; fishing.
Grayburg Oil Co. No. 8 Burch, SE SE NW sec. 19-17-30. Drlg. 2,255 ft.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. T.D. 115 ft.; shut down.
H. & W. Drlg. Co. No. 1 Storey Permit, C NW SE sec. 31-19-30. T.D. 1,698 ft.; fishing.
Woodworth Hawkins No. 1 Mack, C SW SW sec. 20-24-27. T.D. 162 ft.; S.D.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 1,320 ft.; S.D.; high water.
Murchison & Closuit No. 1-C State, SW SE NE sec. 16-17-31. T.D. 3,749 ft.; P.B. 3,745 ft.; bailing.
Nash-Windfohr & Brown No. 4-A Jackson, NE sec. 13-17-30. T.D. 3,189 ft.; testing.
Nash-Windfohr & Brown No. 5-A Jackson, NE sec. 13-17-30. Drlg. 60 ft.
Nash-Windfohr & Brown No. 4-A Stevens, C SW SW sec. 13-17-30. Drlg. 2,630 ft .
Nash-Windfohr & Brown No. 2-B Stevens, NW sec. 13-17-30. Rig.
Nash-Windfohr & Brown No. 6-A Jackson, SE sec. 13-17-30. R.U. machine.
Nash-Windfohr & Brown No. 7-A Jackson, SE sec. 13-17-30. R.U. machine.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat; T.D. 3,697 ft.; testing.
Premier Pet. Corp. No. 1-E Parker, sec. 22-17-30. Drlg. 2,800 ft.
Repollo Oil Co. No. 2-D McIntyre, NW NE SW sec. 20-17-30. Drlg. 2,950 ft.
Paul Sargent No. 1 State, NE sec. 16-17-31. Drlg. 3,292 ft.
R. A. Shugart No. 1 Cowethard, C NW SW sec. 35-18-31. Drlg. 2,750 ft.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. Drlg. 620 ft.
Superior Oil Co. No. 1 Foster, SE SE NE sec. 17-17-31. T.D. 3,574 ft.; to acidize.
Weiner & McDowall No. 1 Kerr, C SE NW sec. 3-24-24. Drlg. 1,820 ft.
W. K. Royalty Co. No. 1 State, C SW NE sec. 16-17-31. T.D. 3,180 ft.; W.O.C.
Western Drlg. & Eng. Co. No. 1 Western, NW sec. 26-17-29. T.D. 2,831 ft.; testing.
Western Gas Co. No. 1 Cagle, C NW NW sec. 8-26-30. Drlg. 1,270 ft.

Chaves County

English & Harmon No. 1 Billingslea, SE sec. 9-15-29. T.D. 3,545 ft.; P.B. 3,427 ft.; shut down.
E. J. Fisher No. 1 Etz Permit, NE sec. 23-7s-36. Moving in machine.
Mathewson et al No. 1 McDonald, C NE NW sec. 19-14-27. Drlg. 300 ft.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. Drlg. 2,925 ft.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fishing.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; shut down.
Fred Turner No. 1 Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat; T.D. 3,763 ft.; S.D.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. Drlg. 325 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. 3,600 ft.

San Juan County

Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,995 ft.
Red Butte Oil Co. No. 1 Govt., C SW SW sec. 6-21n-13w. Drlg. 510 ft.
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. S.D. 725 ft. for pipe.

Socorro County

Central New Mexico Oil Co. No. 1 Brown, SE NW sec. 16-3n-1e. Drlg. 300 ft.; rotary tools.

Valencia County

C. A. Brober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. Drlg. below 700 ft.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. T.D. 4,345 ft.; fshg. for pipe.

Archuleta County

Two wells to test out the Gramps No. 1 structure on the northwest are now under way. Lafayette M. Hughes' No. 14 Gramps, on the Hughes permit, SW NW NW section 13-33n-2e, about a mile north and half a mile west of the nearest producer of the William E. Hughes Estate, is drilling at 2,050 feet. This is on the west side of the Navajo River, while the Hughes Estate producers are on the east side. A fault traverses the area and depth to the Dakota may range anywhere from 2,000 to 2,800 feet.

The Prospect Oil Syndicate is drilling just to the north of No. 14 Gramps, in section 12. It spudded September 6 in a 12½-inch hole and is drilling in gravel at 90 feet. This was carried as a first report last week under O. G. McDonald.

The Oil City Petroleum Co. No. 1-A Garnett, NE NW SW section 25-33n-2e, on the southwestern side of the Gramps pool, which was deepened through the Lakota by the Prospect Oil Syndicate, failed to find anything in that horizon and is being abandoned. Last reported

See them in action at HOUSTON
OCT. 11-16 at the OIL WORLD EXPOSITION

You are invited to an action-exhibit of Oil Industry pipe threading and cutting equipment by the makers of the most complete and up-to-date threading line in the world . . . OSTER-WILLIAMS. Among the operating demonstrations will be—

The ideal combination pipe threading and bucking-up machine designed to meet all emergencies of oil-field service. Capacity 2½" to 8⅝". 30,000 foot-pounds torque.

RAPIDUCTION 8-XHD

WILCO OIL FIELD SPECIAL

The time-tested always-popular "WILCO," equipped with special wide die-head to adapt it to oil-field needs.

NEW No. 222 TORCH CUTTER

The brand-new, completely re-designed OSTER Torch Cutter, for producing accurate low-cost pipe-intersections for welding.

OSTER THREADING EQUIPMENT WILLIAMS

THE OSTER LINE INCLUDES

SOLID and ADJUSTABLE DIE-STOCKS, PLAIN, RATCHET AND GEARED . . . "Leader," "Bulldog," "Bull Pup" and "Chip Chaser."

PORTABLE PIPE-THREADING MACHINES . . . "Tom Thumb," "Power Boy," and "Willie Williams."

POWER-DRIVEN PIPE-THREADING MACHINES, for BOTH MAINTENANCE and HIGH PRODUCTION SERVICE . . . "Oster," "Rapiduction," "Wilco" and "Standard."

POWER PIPE CUTTERS

TORCH CUTTER for PIPE INTERSECTIONS AND ACCESSORY WELDING EQUIPMENT

"BESTOIL" CUTTING OIL

Also PRODUCTION AND PORTABLE POWER BOLT-THREADING MACHINES . . . "Rapiduction" and "Tom Thumb."

BOOTHS 714-716-718-720-722
MAIN EXPOSITION BUILDING

THE OSTER MANUFACTURING COMPANY
SALES OFFICE: 2046 East 61st Street, Cleveland, Ohio
FACTORIES: Erie, Pennsylvania, and Cleveland, Ohio
New York City Showroom and Office, 292 Lafayette St.

Specialists for 43 years in the manufacture of top quality hand and power pipe-threading tools and machines, Oster can give you the efficient answer to virtually any kind of pipe or bolt threading job. Send your inquiries to "Threading Headquarters."

depth was 1,515 feet. It drilled about 200 feet deeper before stopping. Top of first Dakota was 1,415 feet.

Lafayette M. Hughes No. 14 Gramps, SW NW NW sec. 13-33n-2e. Drlg. 2,050 ft.
Prospect Oil Syndicate No. 1 Lena M. Garnett, SW SW SW sec. 12-33n-2e. Spdg. 93 ft.

Bent County

Indian Terr. Ill. Oil Co. and Olson Drlg. Co. No. 1 Arbes, C Lot 2, sec. 2-21-48w. Drlg. 5,516 ft.

Boulder County

J. B. Furstenberg No. 1 Foote, SE sec. 20-1n-70w. Drlg. 2,430 ft.
Boulder Prod. & Dev. Co. No. 11 Harlow Est., SE NE sec. 36-2n-71w. S.D.O. 765 ft.; dry in Muddy.

Eagle County

Stanolind Oil & Gas Co. No. 1 Jenkinson, NW SW SW section 24-4s-85w, on the Gypsum Creek structure, lost the tools at 1,000 feet, and as that was the projected depth of the test, it was decided to abandon the hole. Whether another well will be drilled has not been announced. A surface structure was worked out at Gypsum Creek, followed by a seismograph survey. It was decided to drill a 1,000-foot test to determine whether it is a structure or a gypsum squeeze. It was in gypsum when drilling stopped. It was considered possible that an oil sand would be encountered within the contracted depth.

Fremont County

Utex Oil Co. No. 26, C SE SW sec. 20-20s-69w. S.D.O. 2,730 ft.; may abd.

Garfield County

A good showing of green oil in black sandy Pennsylvanian shale was encountered in the Roaring Fork Oil Co. No. 1 Patterson, on the Roaring Fork structure 10 miles south of Glenwood Springs, at a depth of 492 feet. There was sufficient free oil to fill the slush pit, about 2 feet of oil being on top of water in the bailer. It was drilling in a wet hole, water from a 60-foot sand immediately below the gravel not having been shut off. A string of 10-inch pipe has been ordered and as soon as the water is shut off a test will be made. The showing was encountered in the lower third of the Pennsylvanian section. The thickness of the formation is not definitely known, but H. W. C. Prommel, who mapped the structure, estimates it at 500 to 700 feet. The showing is considered very important as the test is the first to get under way in the big Glenwood Springs Basin which is having a considerable play at this time.

Roaring Fork Oil Co. No. 1 Patterson, C NE sec. 36-7s-88w. T.D. 492 ft.; W.O. pipe.

Kiowa County

Morgan & Flynn et al No. 1 Hostetter, C NW SE sec. 6-20s-46w. Drlg. 5,330 ft.

Larimer County

Great West O. & G. Corp. No. 1 Haworth, C SW SE sec. 16-4n-69w. S.D. 2,135 ft.

LaPlata County

N. Spatter No. 1 Bryce, SE SW SW sec. 31-33n-9w. T.D. 410 ft.; rng. pipe.

Lincoln County

Consolidated Smelting & Metals Corp. No. 1 Hancock, NE NE SW sec. 7-17s-52w. Drlg. 2,096 ft.
Gulf Oil Corp. No. 1 Smith, C SW SE sec. 19-15s-53w. Drlg. 2,100 ft.

Mesa County

Midwest Drlg. & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. T.D. 1,174 ft.; U.R. 10-in. through wet sd. into dry sd.; G.S. through 350 ft. of W.
Continental Oil Co. et al No. 1 Miller, SW SW NW sec. 36-8s-91w. M.I.M.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal, NW NW sec. 18-9n-78w. Drlg. 2,960 ft.

Moffat County

Mountain Fuel Supply Co. No. 1 Duncan, SW NE SW section 1-11n-100w, joint with the Kerlyn Oil Co., a wildcat on the Shell Creek structure, 3 miles south of the Hiawatha gas field, was drilled to 3,750 feet and is preparing to abandon. It drilled through the Wasatch beds without encountering commercial oil or gas and stopped in the Laramie shale. Location is about 4 miles northeast of the Kerlyn Oil Co. No. 1 Marrs, on South Vermillion, which was temporarily abandoned at 3,750 feet. The Wasatch sands were reported compact and tight at South Vermillion and the thinning south of Hiawatha apparently continued to Shell Creek, although the sands showed a little more porosity than at South Vermillion.

Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. Drlg. 2,060 ft.; 10-in. mudded at 1,483 ft.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. S.D. 2,500 ft.; W.O. rotary tools.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; fsg. two strings tools and bailer.

Park County

South Park Oil Co. No. 1 State, SE SE SW sec. 16-11s-75w. T.D. 5,705 ft.; shot 110 qts. at 4,110-90 ft.; C.O.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. S.D. 5,210 ft.; M.I. 6¼-in.

Pitkin County

Glenco Dev. Co. No. 1 Govt., NW cor. sec. 9-10s-89w. T.D. 1,040 ft. (C.D.); rmg. to set 10-in.

Rio Blanco County

Buford Oil Co. No. 1 Govt., C SW SW sec. 16-1n-91w. Drlg. 350 ft.
Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. Drlg. 5,375 ft. in gr. sh.

WYOMING

Albany County

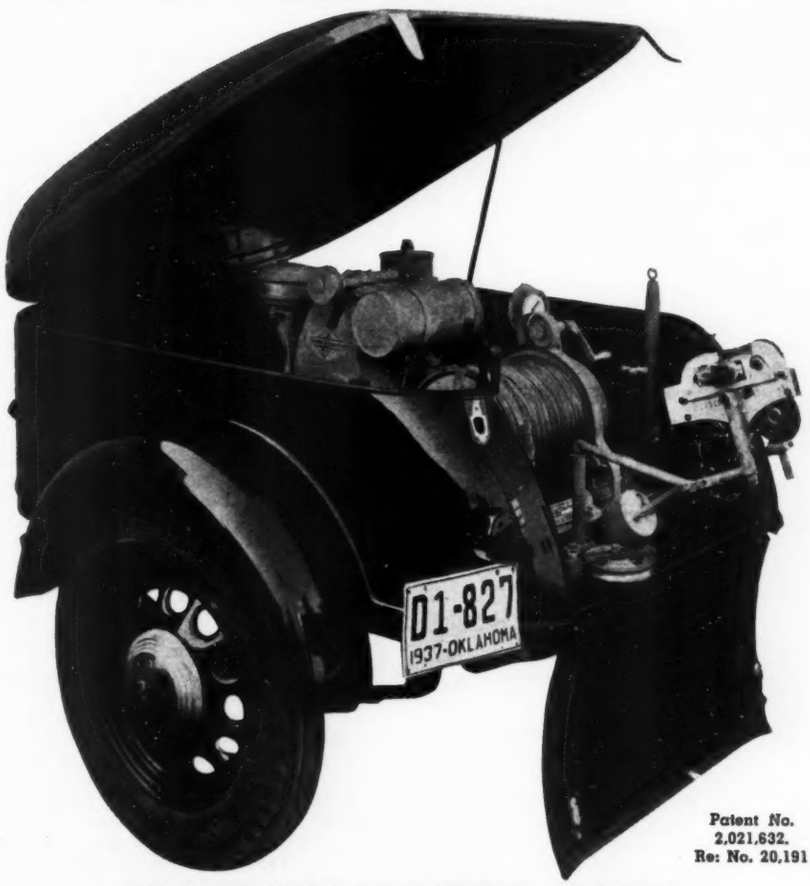
Murphy Oil Co. No. 10 Holst, SE SE NE sec. 13-17n-77w. Drlg. 925 ft. gr. sh. and shells.
Ohio Oil Co. No. 1 Griffin, C SE SW sec. 2-21-77w. Cmtd. 11⅝-in. at 160 ft.
Murphy Oil Co. No. 9 Holst, NW SE NE sec. 13-17n-77w. Drlg. 2,514 ft. in gr. sh., anhyd. and shells.
Wyco Oil Co., Inc., No. 1 Chappel, C NE NW sec. 33-21n-76w. Ran 725 ft. of 5-in. to top of Wall Creek; swbg. drlg. W.
Wyco Oil Co., Inc., No. 2 Chappel, NE NE NW sec. 33-21n-76w. Cmtd. 8¼-in. at 243 ft.; drlg. plg.

Big Horn County

Woods-Callahan Oil Co., Ltd., No. 1 Evans, NE NE NW section 12-49n-91w, a test of the Madison lime on the Paintrock structure, was unable to shut off water in that horizon at a total depth of 2,300 feet, and has plugged and abandoned the hole. It topped the Madison at 2,150 feet and set the 8⅝-inch at 2,152 feet. Water rose 1,500 feet.

In connection with the construction of a 2,500-bbl. asphalt plant being erected near Lovell by Ohio Oil Co. to treat oil from the Garland and Byron domes, it is interesting to note an official record of the production of the discovery well in the Madison lime on the Garland dome. This well, No. 1 Easton, SW NW NW section 33-56n-97w, produced intermittently from December, 1931, to August, 1935, by Ohio Oil Co., and then by the Unit to January, 1936, when it was shut in for lack of a market. During that time it produced 809,875 bbls. It flowed 8,860 bbls. during the last 16 days it was on production against a back pressure of 100 pounds on the tubing. The second Madison lime well, the Utah Southern No. 3 Government, flowed 253,074 bbls. during the same period and 4,290 bbls. in 14 days against a pressure of 1,100 pounds on the tubing before the valve was closed.

Well Surveying Made Easy



Patent No. 2,021,632. Re: No. 20,191

MATHEY PORTA-REEL

—For measuring depth of well
—To locate an obstruction
—To locate fluid level
—To run bottom hole pressure and temperature bomb

The Mathey Porta-Reel is designed and built to give maximum performance and safety in well surveying. Reel capacity is 12,000 feet of standard measuring line. This unit is available in two types: for installation in small panel truck or car with power take-off from transmission; as a self contained gasoline powered unit assembled in a sturdy wooden box or for mounting in trailer as shown above. Measure meter is available for both types. This meter will operate on all sizes of line either solid, insulated, or stranded.

C. A. MATHEY MACHINE WORKS

305 East 3rd St. Tulsa, Oklahoma

Last October the Unit constructed a 1,000-bbl. plant in the field to recover gasoline, fuel oil and liquid asphalt. This opened a better market and products were shipped principally to Minneapolis, St. Paul, Omaha and Chicago. Out of these results grew the plans for the building of the Lovell plant now under way.

Ohio Oil Co. No. 3 Sidon Canal, NW SW (Lot 40), sec. 24-56n-97w. Bldg. road.
Yale Pet. Corp. No. 1 Stock-Jones, SE cor. sec. 52-56n-97w. T.D. 4,050 ft.; drlg. by D.P.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. T.D. 6,060 ft.; will P.B. to 5,760 ft. to test show in Embar.
Joan Oil Co. No. 1 Howell, sec. 32-55n-97w (Lot 63). T.D. 1,150 ft.; U.R. 12½-in.
Peay Oil Co. No. 1 Denio, Tr. 43-C, sec. 15-55n-97w. T.D. 3,930 ft.; fsg.

Campbell County

Powder River O. & G. Co. No. 1 Rhodes, NE SE NW sec. 24-49n-74w. Drlg. 475 ft.; carrying 15½-in.

Carbon County

Ohio Oil Co. No. 12 H.&C., SE SW sec. 35-20n-78w. Spdg.
Sinclair-Wyoming Oil Co. No. 11 Wertz, SE NW NW sec. 7-26n-89w. Drlg. 4,856 ft.
Ohio Oil Co. No. 1 Wyo. O. & G. Co., C SE SW sec. 29-27n-89w. T.D. 1,488 ft.; ran squeeze job, forcing 300 sacks cement between 7 and 10-in.; W.O.C.
Producers Oil Co. No. 1, CNL sec. 14-20s-88w. Drlg. 194 ft.
Ohio Oil Co.-California Co. No. 5 Cronberg-U. P., C NW NW sec. 25-21-79w. Drlg. 5,155 ft.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Drlg. 3,696 ft.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. Drlg. 5,249 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot with 40 qts.; tstg.

Converse County

Ainsworth Oil Co. No. 1 Marberger, NE SE NE sec. 34-32n-69w. Rig. Contr. to H. W. Conley to go 800 ft.; Shawnee Dist. (first report).
Hall-Thornton et al No. 1 Roth, C NW SE sec. 13-32n-69w. S.D. 240 ft. for csg.
Wyoming Southern Oil Co. No. 1 Lane, C NW NE sec. 27-32n-69w. Spd. and S.D.
Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M.
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. 3,960 ft. in Niobrara.
Wyoming Southern Oil Co. No. 3 Salisbury, NE NE SE sec. 27-32n-69w. Prep. to run 6⅝-in. to 540 ft.
Chadron-Osage Oil Co. No. 1, SW NE NE sec. 27-32n-69w. Loc.; shallow gas well, (first report).

Fremont County

Stanolind O. & G. Co. No. 1 Govt., C SE SE sec. 3-33n-96w. R.U.R.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Cg. 8,027 ft. in red sh.
H. Kenyon Burch No. 1 Enos, CEL NE NE sev. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. Drlg. 500 ft.; 8¼-in. at 475 ft.

Hot Springs County

Italo Pet. Corp. No. 1 Phebus-Govt., NW NW SW sec. 11-44n-98w. Drlg. 400 ft.
Oscar B. Grace No. 4 Govt., CNL SE NW sec. 21-43n-92w. Drlg. 378 ft. (Kirby Creek, first report.)

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w. T.D. 1,228 ft.; set pipe on top sat. zone at 1,212 ft.; tstg.

Natrona County

Stanolind O. & G. Co. No. 11 Wyo. Asso.-Tensleep, C NE NW sec. 35-40n-79w. Drlg. 870 ft.
Stanolind O. & G. Co. No. 29 Wyo. Asso.-Tensleep, C SW SW sec. 26-40n-79w. R.U.R.
General Pet. Corp. No. 1 Govt., C NW SE sec. 21-35n-77w. R.U.R.

Niobrara County

There were no completions in Lance Creek, although several wells are at critical depths. A. B. Cobb and the Holly Dev. Co. No. 2 Novick, on the southwestern flank, which was deepened to the Minnelusa and then reported abandoned, is resuming and will test. Total depth is 5,305 feet. It had Minnelusa sand at 5,252-75 feet, saturated except for the last few feet which gave indications of water. No test was made when sand was penetrated and report that well was abandoned proved to be erroneous.

One new operation was reported in Ohio Oil Co. No. 9 Carrie Putnam, an east offset to No. 6 Putnam and a south offset to No. 8 Putnam.

Ohio Oil Co. No. 9 Putnam, C NE NW sec. 4-35n-65w. Cellar. (First report.)
Lewis Goekel No. 1 NE SE NW sec. 31-35n-62e. Resumed drlg. 1,550 ft.
J. M. Huber Corp. No. 3 Joss, NE NE SW sec. 6-35n-65w. R.U.R.
Continental Oil Co. No. 3 Apex-1, SE SE NE sec. 34-36n-65w. Drlg. 2,695 ft. in sh.
W. A. Maupin et al No. 1 Berggren, NW sec. 23-35n-63w. R.U.C.T.
J. M. Huber Corp. No. 2 Lamb, NE SE SW sec. 27-36n-65w. Drlg. 3,540 ft.
Continental Oil Co. No. 5-B Schuricht, C SW SW sec. 5-35n-65w. Drlg. 4,927 ft. in red sd.
Ohio Oil Co. No. 2 Taylor-O.P.C.-32, NW NW SW sec. 3-35n-65w. T.D. 5,611 ft. in Minnelusa trying to get tester on bottom.
Ohio Oil Co. No. 2 Leo-O.P.C., NE NE SE sec. 35-36n-65w. R.U.R.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. Drlg. 5,605 ft.; no shows to this depth.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. T.D. 3,815 ft.; cmtd. 9⅝-in.; Dakota topped at 3,808 ft.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36n-65w. Cg. 5,636 ft.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. T.D. 5,305 ft.; prep. to test.
Continental Oil Co. No. 8 Otto Rohlff, SW SW SE sec. 31-36n-65w. T.D. 4,025 ft.; circulating in with oil after shot 80 qts.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. Drlg. 6,181 ft. in L.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. S.D. 4,064 ft.; Sundance at 4,049-64 ft.; dry.

Park County

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. Drlg. 4,650 ft.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 7,805 ft.
Ohio Oil Co. No. 15 Woods, O.P.C.-3, NW SE sec. 30-58n-99w. Drlg. 800 ft.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. Drlg. gr. sd. 3,414 ft.

Sublet County

The Texas Co. No. 6-J, NE SE SE section 27-27n-113w, La Barge field, was completed at 920 feet after plugging back from 1,071 feet, for 12 bbls. per day on the pump.

Texas Co. No. 3-I, SE NW NW sec. 27-27n-113w. Drlg. 110 ft.

Sweetwater County

Italo Petroleum Corp. No. 1 Government, SW cor. section 36-13n-95w, on the Cherokee Ridge anticline, was started as a water well, but had good gas shows at 70 and 150 feet and will go on down to 1,200 feet and complete as a validation hole. It had water at 610 feet. Location is about 5 miles north of the Colorado line and 4 miles northeast of the Mountain Fuel Supply Co. No. 1-A Williams, which was started as a water well for a deep test, but was completed at 540 feet for 2,610,000 feet of gas per day.

Italo Pet. Corp. No. 1 Govt., SW SW SW sec. 36-13n-95w. Drlg. below 610 ft. (first report).
Sinclair-Wyoming Oil Co. No .77, SE NE NE sec. 10-26n-90w. Lost Soldier district. R.U.R. Contr. to Manning & Martin, Inc.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SW SE sec. 13-17n-104w. Cmtd. off cave at 3,330 ft.; drlg. ahead.
Mountain Fuel Supply Co. No. 1 Williams, C NE NE sec. 5-12n-95w. T.D. 650 ft.; cmtd. 12½-in. at 583 ft.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW sec. 18-19n-103w. T.D. 4,546 ft.; P.B. to 3,800 ft.; recmtg. 8⅝-in. at 3,535 ft.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w, S of Baxter Basin. Loc.

Uinta County

E. A. Ottman et al No. 1 Govt., C SE NW sec. 26-14n-110w. T.D. 930 ft.; recmtg. surf. pipe.

Washakie County

Arlton & Doyle's No. 1 Government, SW SW SE section 29-48n-91w, Hidden Dome field, was abandoned at 1,632 feet, in the Frontier.

Wyoming Oil & Refining Co. No. 9 Government, CNL NE NW section 31-48n-90w, reported a completion last week, was drilled to 1,473 feet and made 20 bbls. per day from sand topped at 1,467 feet. There are no drilling wells in the field at the present time.

Weston County

Osage field production in August totaled 22,407 bbls. and refiners took from runs and storage 26,550 bbls.

Three wells were completed, all dry holes. Osage Trust Co. No. 4, SE NW SE section 22-46n-63w, was dry below 200 feet. H. D. Wiltse No. 9, CNL NW NE section 22-46n-63w, was dry in the Muddy. Charles Stough No. 9, C SW NW section 4-46n-63w, was dry at 310 feet.

Beaver Creek Syndicate No. 1 State, C NE NE section 23-44n-63w, for which rig was erected in 1934, has been taken over by associates of the Norbeck Drilling Co. and is preparing to spud. The test is on the Beaver Creek structure. It is being carried as Charles Goodell and others.

Chas. Goodell et al No. 1 State, C NE NE sec. 23-44n-63w. Ready to spud.
John Brorphy No. 1 George, SW SE NW sec. 26-48n-64w. Drlg. below 800 ft. in base of Sundance. (Cor. loc.; formerly Big Indian Oil & Dev. Co.)
Mush Creek Oil Co. No. 1 Carmine, SE SW sec. 31-44n-62w. Drlg. 100 ft.
Le Faivre Oil Synd. No. 1 Martin, NW NW SW sec. 29-45n-68w. Drlg. 2,550 ft.; will U.R. 10-in. at 2,130 ft. for W.S.O.

MONTANA

Big Horn County

E. L. Dana No. 1 Hardy, SW NW sec. 22-9s-35e. Drlg. 200 ft. in Claggett sh.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D. 4,120 ft. (C.D.); H.F.W.

Carbon County

Miracle Oil Co. No. 2, CWL NE SE sec. 3-6s-23e. Drlg. 1,495 ft.
R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. Drlg. 1,065 ft.
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. Drlg. 5,233 ft.
Geo. Muth et al No. 1, CSL SE SE sec. 23-6s-23e. S.D. indef. at 1,500 ft.
Henderson Prod. Co. No. 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. Drlg. 1,618 ft.; prep. to run 10-in.

Choteau County

Security Pet. Co. No. 1 Johnson, NE sec. 23-26n-3e. Drlg. 1,400 ft.

Cascade County

C. Leonard Smith No. 1-A Smith-Schwingle, NE NE SW sec. 14-22n-2e. Resumed drlg. at 700 ft.

Fallon County

Johnson-Burke No. 1 Govt., SE NE SE sec. 6-8n-79e. Drlg. 1,200 ft.

Glacier County

Cut Bank had three completions and one new operation.

Glacier Production Co. No. 1 Monroe Unit, SW SW NE section 23-33n-5w, was completed at 2,764 feet for 10,000,000 feet of gas per day. Sunburst sand was at 2,682-2,714 feet with a show of gas, and the Cut Bank sand was at 2,726-64 feet. Elevation is 3,859 feet.

K. D. Pardee No. 1 Jackson, CSL SE NE section 35-34n-6w, and his No. 1 Corrigeaux, NE NE SE section 35-34n-6w, were completions, but sand records and results were not made public.

Glacier Production Co. No. 1 Bickett Unit, 2,640 ft. W of E line and 2,480 ft. N of S line, sec. 14-34n-5w. Cellar and sump (first report).
Montana Headlight Oil Co. No. 9 Yunck, NE SW NW sec. 1-34n-6w. Drlg. 1,980 ft.
Montana Headlight Oil Co. No. 10 Yunck, C SW SE sec. 1-34n-6w. Drlg. 2,000 ft.
Texas Co. No. 1 Curren, C SE SE sec. 5-32n-5w. Drlg. 1,525 ft.
Glacier Prod. Co. No. 3 Fuller, SE SE SE sec. 17-33n-5w. Rng. 7-in. at 2,935 ft.
Glacier Prod. Co. No. 1 Newell Unit, SE SE NW sec. 13-33n-5w. Cmtd. 7-in. at 2,647 ft.; W.O.C.
Texas Co. No. 5 Tribal-121, C SW SE sec. 36-33n-6w. Drlg. 2,720 ft.
Texas Co. No. 3 State (M-455), C NE NW sec. 16-32n-5w. Drlg. 2,445 ft.
Texas Co. No. 7 Morrison, CEL SW SE sec. 22-35n-6w. T.D. 2,925 ft.; 1,450 ft. oil in hole.
Lawler-Hoer No. 2 Downen, SW SE SW sec. 9-33n-5w. Drlg. 1,500 ft.
Indian Oil Co. No. 3 Haglund Sr., C SW NW sec. 13-34n-6w. Drlg. 1,875 ft.
R. C. Tarrant No. 6 Long-Miller, C SW NW sec. 24-34n-6w. T.D. 2,290 ft.; fshg.
Drumheller Oil Trust No. 1 fee, C NE SW sec. 17-34n-6w. T.D. 2,700 ft.; C.O. 2,565 ft.
A. R. Pardee No. 1 Anderson, C SE SW sec. 31-32n-5w. S.D. 2,900 ft.

Outside Cut Bank

W. E. Ullman No. 1 Allotted, C SW sec. 35-36n-8w. Drlg. 3,438 ft.

Hill County

Nadeau Bros. No. 1 O'Neal, NW NW NW sec. 34-32n-17e. Drlg. 1,300 ft. (first report).

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e. T.D. 1,700 ft.; S.D.

Musselshell County

R. C. Tarrant and J. C. Johnson No. 24-A Government, SW NW NW section 25-11n-24e, Devil's Basin, was abandoned at 1,201 feet. The horizon in which the pay was expected was missing. It went out of hard lime shell at 1,168-70 feet into shale.

Park County

Ben W. Ryan et al No. 1 Brugess, SE SW NW sec. 28-2s-11e. Drlg. 830 ft. after installing heavier equip.

Petroleum County

O. B. Canfield No. 1 Govt. CEL SE NE sec. 21-17n-24e. Drlg. 750 ft. after C. O. fish.

Roosevelt County

John W. Schmidt et al No. 1 Freu, NW NW NE sec. 21-28n-50w. Drlg. 700 ft.

Toole County

The Kevin-Sunburst field had five completions and one new operation.

Ohio Oil Co. No. 3 Swayze, SE NW SW section 35-36n-2w, was completed at 1,615 feet for 12 bbls. the first 24 hours from the Sunburst at 1,572-97 feet after a shot with 40 quarts.

Rimrock Oil Co. No. 3 Schmidt, SE NW NW section 29-35n-3w, made 4 bbls. per day from the contact at 1,805-15 feet.

Raymond E. Dockery No. 2 Gunderson, SE SW NW section 19-35n-2w, swabbed 28 bbls. the first 24 hours from the contact at 1,574-87 feet.

P. L. Eddy No. 7 Seabrook, SE SW SW section 19-35n-2w, made 12 bbls. naturally per day from contact at 1,520-25 feet and may be acidized later.

Rice Oil Co. No. 1 Anderson, SW SW NE section 8-35n-1w, made 40 bbls. per day on the pump from the contact at 1,734-38 feet after acidizing with 500 gals. Prior to treatment it made 10 bbls. per day.

Henry Vander Pas No. 1 Ward, SE SE NE sec. 28-35n-3w. Drlg. 250 ft. (first report).
Treasure State Oil Co. No. 5 Shaw, NW SE NE sec. 35-36n-2w. Drlg. 900 ft.
Guy Smith No. 1 Govt., C NE SE sec. 25-36n-3w. Spd. 10 ft. and S.D.

(Continued on Page 115)

Kansas Developments

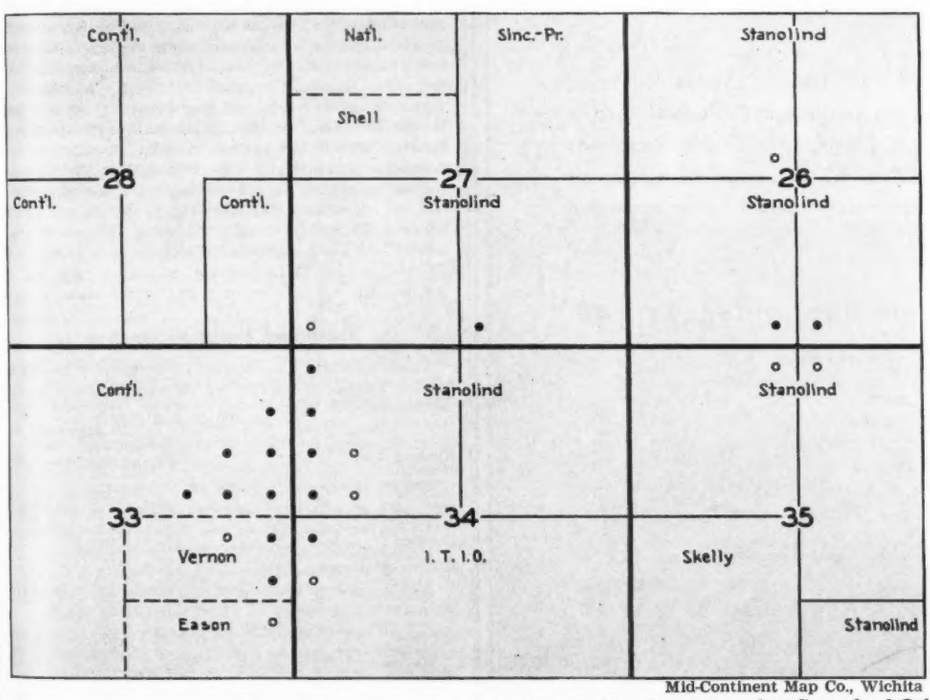
By
DAL DALRYMPLE

OPEN NEW AREAS AT SEVEN OUTPOSTS, TWO OTHERS FAIL

The Ainsworth pool of northern Barton County was extended one-half mile northeast, extension of the Shutts pool of Ellis County one-half mile northward appeared assured, several large producers were added in the rapidly growing Bemis field of Ellis County and in the Russell County areas, and seven wildcats out of nine completed during the past week opened new producing areas.

Stanolind Oil & Gas Co. No. 1 Thorne, SW SW SE section 27-16-13w, the Ainsworth extensioner, was reported swabbing at the rate of 30 bbls. of oil an hour. Oil rose 1,800 feet in the hole in one hour after plugs set at 3,393 feet were drilled. Total depth was 3,397 feet in Siliceous lime.

McPherson Drilling Co. and others No. 1 Bemis, SE SE SW section 33-11-17w, one-half mile north of the Shutts pool, found oil saturation in Siliceous lime at



Mid-Continent Map Co., Wichita

The Ainsworth Pool of Barton County was extended one-half mile eastward at Stanolind Oil & Gas Co. No. 1 Thorne, section 27-16-13w

3,613 feet, and set 7-inch casing, and was due for test.

Diller Oil & Gas Co. and Harry L. Mourer No. 1 Draper, NE NE NW section 10-24-17, which recently opened a pool in Woodson County, filled 200 bbls. of storage in the first 23 hours after acidizing and was shut in for installation of power. It had pay at 1,203-06 feet, total depth. Drilling has been started at No. 1 Diver, east offset to the discovery, and location has been made for No. 1 Deyo, north offset. The operators have a 2,000-acre block in the area.

La Cynge Gas Co. is drilling a deep test well in C S half SW section 35-19-24, east of La Cynge in Linn County, on structure. Operators have underreamed 6¼-inch casing to 1,324 feet, and plan to drill deeper. Location is on a high, ascertained from logs of about 40 shallow wells drilled in the district, but data on deep formations in the area are lacking. Top of Mississippi lime was found at 460 feet.

Sinclair Prairie Oil Co., Carter Oil Co. and Indian Territory Illuminating Oil Co. were due to start work at a wildcat in section 26-27-22w, Ford County, in the southwestern part of the state, and southeast of Dodge City. It is planned to go to 7,500 feet and will be one of the deepest tests to be drilled in that part of the state.

The sale of 150 producing oil wells in Woodson and Neosho counties by Frank Young and W. W. Kaney of Chanute to a group of Tulsa, Okla., and Bradford, Pa., operators was announced the past week. The purchasers were D. P. Oak and Darby-Lynde Co. of Tulsa, and T. B. Wilson and H. J. Walter, Bradford, Pa. They have been active in water-flood projects in the Nowata field, northeastern Oklahoma. The sale price was reported as approximately $250,000.

The market demand for Kansas crude oil in October was estimated at 199,900 bbls. by the Bureau of Mines. This is a decline of 1,000 bbls. daily from the bureau's estimate for September, but in excess of the allowable of 196,500 bbls. set for September by the Kansas Corporation Commission. The market demand hearing will be held at Wichita September 24, at which time the Kansas commission also is scheduled to hear oral arguments on potential for wells in the Hauschild area of Rice County, now challenged.

Wildcat Completions

Nine wildcats were completed in Kansas the past week, six being oil wells, one a gas well and two were failures.

Newman & Winemiller No. 1 Sittner, NE cor. section 33-21-12w, pool opener in northern Stafford County, flowed 234 bbls. of oil in the first four hours of potential test, 254 bbls. in the next four hours and made potential of 1,408 bbls. It was acidized. Kansas City lime was topped at 3,278 feet, total depth 3,414 feet.

Another Stafford County area was opened at Stanolind Oil & Gas Co. and others No. 1 Hartnett, NW NW SE section 23-24-11w, east of the town of Stafford and about 1 mile from the Reno County line. It found Simpson formation at 3,795 feet, was bottomed at 3,807 feet, flowed 195 bbls. of 41.3-gravity oil in the first four hours, 162 bbls. in the next four hours and made potential of 974 bbls.

H. V. Holland and associates No. 1 Brothers, SE cor. section 12-21-7w, wildcat northeast of the Wherry pool in Rice County, topped Conglomerate at 3,455 feet, total depth 3,469 feet, and pumped 105 bbls. of oil in the first four hours of potential test, 110 bbls. the next four hours and made potential of 627 bbls. of oil, with 1 per cent water.

A new area was opened in northeastern Ellis County, west of the Fairport pool, at Billings No. 1 Smith, SE SE NW section 14-12-16w. Top of Siliceous lime was 3,356 feet, first oil was found at 3,360 feet, total depth 3,385 feet. It originally made potential of 572 bbls. of oil after acid treatment at 3,373 feet, total depth, pumping 94 bbls. in the first four hours. It was deepened to 3,385 feet and acidized, failed to increase production and was completed for original potential.

E. B. Shawver No. 1 fee, NW NE SE section 3-30-4e, north of the Rock pool in northern Cowley County and near the Butler County line, had Bartlesville sand at 2,811-28 feet, total depth, pumped 33 bbls. of oil in eight hours and had potential rating of 96 bbls.

Robinson and others opened a new area northeast of Sedan in Chautauqua County at No. 1 Foster, SW cor. section 6-33-12. It had Siliceous lime at 1,981 feet, was bottomed at 1,986 feet, was acidized and pumped 15 bbls. of oil and 12 bbls. of water daily.

A new gas sector was uncovered in Grant County at United Production Co. No. 1 Blake, C SW section 21-30-36w. It had gas sand at 2,540-50 feet, total depth 2,751 feet, plugged back to 2,570 feet and produced 2,300,000 feet of gas.

Hutchinson Oil & Gas Co. and others No. 1 Ehrmann, SE SE SW section 15-18-1e, Marion County wildcat, found Simpson Dolomite at 3,290 feet, Wilcox sand 3,308 feet, Siliceous lime 3,370 feet and was dry and abandoned at 3,430 feet, total depth.

Coronado Oil Co. No. 1 Atkinson, SW NE SW section 22-29-10, wildcat in Elk County, was dry and abandoned at 1,400 feet, total depth.

Russell County

Texon Oil & Land Co. No. 1 Letsch, NW NW SW section 26-14-13w, Russell County, found Kansas City lime at 2,814 feet, total depth 2,943 feet, was acidized, pumped 172 bbls. of oil the first four hours and made potential of 1,029 bbls.

R. H. Shields and associates No. 2 Letsch, SE NE SE section 27-14-13w, found Kansas City lime at 2,805 feet, was bottomed at 2,860 feet, acidized, flowed and pumped 576 bbls. of oil in four hours, getting potential of 2,891 bbls.

Cities Service Oil Co. No. 4 Vaughn, SW NW SW section 17-14-14w, was acidized and made potential of 1,562 bbls. of oil. Top of Kansas City lime was 3,026 feet, total depth 3,065 feet.

Phillips Petroleum Co. No. 3 Carroll, NE SE SE section 18-14-14w, had Kansas City lime at 3,013 feet, total depth 3,045 feet, was treated with acid, pumped and flowed 419 bbls. of oil in four hours, potential 2,339 bbls.

Cities Service Oil Co. No. 5 Strecker A, SW SW NE section 35-14-14w, found Granite Wash at 3,256 feet and was dry and abandoned at 3,280 feet.

Phillips Petroleum Co. No. 1 Michel, SW SE NW section 36-14-14w, swabbed 72 bbls. of oil in six hours after acidizing Kansas City lime topped at 2,891 feet, total depth 2,945 feet, and made potential of 268 bbls.

Polcyn No. 1 fee, NE SW SE section 10-14-15w, had Gorham sand at 3,260 feet, total depth 3,262 feet, and made potential of 1,101 bbls. of oil.

Hartman & Blair No. 6 Harbauh, NE NW SW section

Gotkoo!
WATER CANS
& COOLERS
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . . . .
Gott
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
GOTT WATER CAN
Made in 1½, 3, 5, and 10 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

Patent Notice

The following Letters Patent of the United States covering processes of electrically determining the nature of geological formations traversed by drill holes (electrical logging), and other processes for assisting the oil producers, including the detection of water intrusion and side-wall sample taking, are solely owned by or exclusive licenses thereunder have been granted to

SCHLUMBERGER WELL SURVEYING CORPORATION

Notice is hereby given that legal proceedings will be instituted against infringers.

1,819,923	1,980,100
1,826,961	1,996,530
1,845,379	2,015,873
1,893,311	2,018,080
1,894,328	2,020,856
1,913,293	2,038,046
1,955,166	2,050,128
1,970,342	2,055,506
	2,084,143

SCHLUMBERGER
WELL SURVEYING CORPORATION
HOUSTON, TEXAS, U.S.A.
"Electrical Well Logging"

Branch Offices:

TEXAS: Midland, Freer, McAllen, Corpus Christi, Wharton, Beaumont, Tyler. LOUISIANA: Lake Charles, New Iberia, Houma, Shreveport. OKLAHOMA: Oklahoma City, Ardmore. ARKANSAS: El Dorado. KANSAS: Hutchinson. WYOMING: Casper. ILLINOIS: Mattoon. CALIFORNIA: Long Beach, Bakersfield, Ventura, Coalinga. PENNSYLVANIA: Bradford.

25-14-15w, had Gorham sand at 3,166-76 feet, total depth, plugged back to 3,170 feet and made potential of 1,660 bbls. of oil.

Continental Oil Co. No. 2 Meharg, NE NW NE section 17-15-13w, topped Siliceous lime at 3,306 feet, total depth 3,315 feet, was acidized, pumped 206 bbls. of oil in four hours and made potential of 1,134 bbls.

Sinclair Prairie Oil Co. and others No. 2 Berrick, SE SW SE section 23-15-13w, topped Siliceous lime at 3,248 feet, total depth 3,283 feet, plugged back to 3,257 feet and acidized, but was dry and abandoned.

Cities Service Oil Co. No. 9 Boomhower, SW NE NE section 25-15-14w, pumped 300 bbls. of oil in the first four hours after acid treatment and made potential of 1,562 bbls. Top of Siliceous lime at 3,315 feet, total depth 3,322 feet.

Darby Petroleum Corp. No. 4 Michaelis, SE cor. section 36-15-14w, had Siliceous lime at 3,278 feet, total depth 3,285 feet, was acidized, pumped 375 bbls. of oil in four hours, potential 2,250 bbls.

First reports of new activity in Russell County: Cities Service Oil Co. No. 5 Vaughn, NW NW SW section 17-14-14w, location; National Refining Co. No. 3 Reinhardt D, SE NE NE section 19-14-14w, cellar; Central Petroleum Co. No. 5-C Foster B, NE SE NE section 3-14-15w, building rig; Transwestern Oil Co. No. 5 Katharina Polcyn, NE NE NW section 14-14-15w, location; C. L. Price No. 1 Sebesta, NE cor. section 36-15-11w, wildcat, building rig; W. I. Southern, Inc., No. 10 Sellens heirs, SE NW SW section 29-15-13w, set 10-inch casing at 365 feet; same operator's No. 12 Boomhower, NE NW NE section 30-15-13w, rigging up rotary; Darby Petroleum Corp. No. 5 Michaelis, SW SE SE section 36-15-14w, moving in material; Stanolind Oil & Gas Co. No. 13 Mermis, SE NE NE section 5-14-15w, same company's No. 16 Mermis, SE NW NE section 5-14-15w, and same company's No. 22 Mermis, NW SE NE section 5-14-15w, locations; Transwestern Oil Co. No. 10 William Polcyn, NW NE SW section 11-14-15w, rig; Phillips Petroleum Co. No. 2 America, NW NW SW section 6-14-14w, rig; same company's No. 4 Carroll, SE NE SE section 18-14-14w, location; Texon Oil & Land Co. No. 2 Letsch, SW NW SW section 26-14-13w, location; Cities Service Oil Co. and others No. 5 Bender A, SW NE NW section 25-15-14w, rig; Coralena Oil Co. No. 6 Deines, NW SE NE section 36-15-14w, rig; Carter Oil Co. No. 7 Detrich, SE SW SE section 8-15-13w, location; Transwestern Oil Co. and others No. 1 Sadie Boomhower, SE SE SW section 19-15-13w, rig; Skelly Oil Co. No. 8 Neidens, SE SW SE section 32-15-13w, location.

Estimated Daily Production

Estimated daily production of Kansas for the week ending September 18, and for the preceding week, was as follows:

	Barrels	
	Sept. 18	Sept. 11
Oxford City	1,350	1,400
Burrton	14,000	14,175
Ritz-Canton	4,875	4,975
Graber	2,400	2,050
Hollow-Nikkel	2,600	2,675
Lerado	2,125	2,425
Voshell	2,450	2,500
Wellington	3,150	3,200
Ellsworth County:		
Lorraine	4,175	3,475
Other pools	1,165	1,510
Rice-Barton counties:		
Bloomer	4,700	3,400
Chase	8,350	6,875
Geneseo	2,000	1,725
Raymond	1,525	1,850
Silica	18,900	17,200
Keesling	1,725	1,450
Hauschild	1,400	1,450
Miscellaneous Rice	9,910	8,445
Miscellaneous Barton	6,020	6,790
Russell County:		
Fairport	2,385	1,965
Gorham	1,800	2,025
Russell	1,915	1,805
Sullivan	8,195	8,270
Trapp	14,405	14,310
Miscellaneous Russell	8,065	7,995
Sedgwick County:		
Valley Center	1,030	1,005
Miscellaneous	2,735	2,715
Ellis County:		
Bemis	5,225	4,525
Miscellaneous	2,820	3,235
Kingman County	460	505
Stafford County	4,015	2,950
Greenwood County	10,050	10,000
Butler County	15,400	15,310
Other fields	24,155	24,215
Total Kansas	195,475	188,400

Ellis County

Deep Rock Oil Corp. No. 17 Baumer, SW NW NE section 27-11-17w, Bemis field, Ellis County, topped Siliceous lime at 3,468 feet, was completed at 3,481 feet, total depth, pumped 479 bbls. of oil in the first four hours and made potential of 2,875 bbls.

Margay Oil Co. No. 3 Johansen, SE SW SE section 22-11-17w, had Siliceous lime at 3,425-32 feet, total depth,

pumped 425 bbls. of oil the first four hours, getting potential rating of 2,520 bbls.

Texas Co. No. 10 Bemis A, SW NE NE section 28-11-17w, pumped 348 bbls. of oil in the first four hours, making potential of 2,307 bbls. Top of Siliceous lime was 3,472 feet, total depth 3,482 feet.

Cities Service Oil Co. No. 3 Johansen, SW NW NE section 22-11-17w, found Siliceous lime at 3,454 feet, was bottomed at 3,460 feet, and had potential of 2,203 bbls. of oil, after pumping 367 bbls. in the first four hours.

York State Oil Co. No. 4 Bemis, NW NW SW section 28-11-17w, was acidized and pumped 170 bbls. of oil in the first four hours, getting potential of 1,020 bbls. Top of Siliceous lime was 3,483 feet, total depth 3,510 feet.

In the Marshall area, Lario Oil & Gas Co. No. 6 Marshall, NW SW SE section 36-11-18w, uncovered Siliceous lime at 3,624 feet, was bottomed at 3,630 feet, and made potential of 2,248 bbls. of oil.

Two wells were completed in the Walter pool. Indian Territory Illuminating Oil Co. No. 1 Staab, SE SW NW section 11-12-18w, found Siliceous lime at 3,656 feet, total depth 3,666 feet, and swabbed 158 bbls. of oil in first four hours and made potential of 1,496 bbls.

Gulf Oil Corp. No. 2 Koerner, NW NE SW section 11-12-18w, swabbed 40 bbls. of oil in three hours after topping Siliceous lime at 3,668 feet and stopping at 3,677 feet, total depth. It was treated with acid and pumped 201 bbls. of oil the first four hours, with potential rating of 1,100 bbls.

New work in Ellis County: Republic Natural Gas Co. No. 5 Romine, SE NW NW section 18-11-16w, moving in material; Margay Oil Co. No. 5 Johansen, SW SE SE section 22-11-17w, building rig; Deep Rock Oil Corp. No. 18 Baumer, NE cor. section 27-11-17w, set 10-inch casing at 1,118 feet; same company's No. 20 Baumer, SE NW NE section 27-11-17w, set 10-inch casing at 1,261 feet; same company's No. 21 Baumer, SW NE NE section 27-11-17w, location; Margay Oil Co. No. 5 Bemis E, SW SW NW section 28-11-17w, location; Transwestern Oil Co. and others No. 2 Solomon, 330 feet north and 749 feet west of south quarter corner, section 28-11-19w, location; Champlin Refining Co. No. 2 Meier A, SE NE SW section 36-11-18w, drilling; Gulf Oil Corp. No. 1 Pearl, NE NE SE section 13-11-17w, location; Lario Oil & Gas Co. No. 3 Romine, NW NW SW section 18-11-16w, location.

Rice County

Continental Oil Co. and others No. 3 Lansing A, SW NE SW section 25-18-8w, Geneseo district, Rice County, was acidized and pumped 321 bbls. of oil in the first four hours, gaining potential rating of 1,861 bbls. Top of Siliceous lime was 3,137 feet, total depth 3,226 feet.

Same operator's No. 1 Johnson, NE SE SW section 12-18-8w, found Siliceous lime at 3,165 feet, total depth 3,243 feet, made potential of 1,431 bbls. of oil; was acidized, pumped 315 bbls. of oil in four hours and made new potential of 1,859 bbls.

Cities Service Oil Co. No. 3 Coldwater B, NW cor. section 17-20-9w, had Siliceous lime at 3,281 feet, was bottomed at 3,290 feet, pumped 274 bbls. of oil in four hours after acid treatment and made potential of 1,592 bbls. It extended the Chase pool one-fourth mile east and may be a connecting link with the Empire pool.

Carter Oil Co. No. 4 Risse, C S half S half SW section 33-19-10w, Silica field, topped Siliceous lime at 3,299 feet, total depth 3,310 feet, pumped 95 bbls. of oil in three hours and 40 minutes; was acidized, pumped 338 bbls. of oil in six hours and gained potential of 1,645 bbls. of oil.

El Dorado Refining Co. and Dick Sage No. 2 Gossman, NW NE SW section 5-21-7w, Saxman-Theede area, made potential of 418 bbls. of oil from Conglomerate topped at 3,332 feet, total depth 3,351 feet.

Torry & Feaster No. 2 Rose, SW NW SE section 32-19-9w, was dry and abandoned after plugging back to 3,250 feet from 3,257 feet, total depth.

Operations reported for the first time in Rice County: Continental Oil Co. and others No. 1 Pickerill, NW SW SE section 13-18-8w, rigging up rotary; Bridgeport Machine Co. and others No. 8 Habiger, SW NW NW section 5-18-10w, drilling at 70 feet; Stanolind Oil & Gas Co. No. 4 Manke, NW SW SE section 28-19-10w, rig; same company's No. 4 Hathaway, NW NE SW section 33-19-10w, set 13-inch casing at 216 feet; Texas Co. No. 9 Kiele, NE SE SW section 34-19-10w, cellar; Continental Oil Co. No. 2 Groth, SE SW SW section 32-20-7w, rigging up rotary; same company's No. 3 Groth, SE SE SW section 32-20-7w, rigging up rotary; Cities Service Oil Co. No. 2 Coldwater A, SW cor. section 8-20-9w, cellar; same company's No. 4 Coldwater B, SW NW NW section 17-20-9w, building rig; Gulf Oil Corp. No. 2 Lyons, NE cor. section 18-20-9w, building rig; Gulf Oil Corp. No. 1 Stout, NE cor. section 6-18-10w, rig; Republic Natural Gas Co. No. 8 Wendell, SE NE SE section 32-19-10w, drilling; Carter Oil Co. No. 6 Risse, 1,188 feet north and 1,320 feet west of south quarter corner, section 33-19-10w, location; Comanche Oil Co. No. 1 Reese, NE NE NW section 22-19-9w, location; Shell Petroleum Corp. No. 2 Reese, NE NW NE section 22-19-9w, location; Reserve Development Co. No. 1 Heter, SE SE NE section 1-21-8w, rig; H. B. Garden No. 1 Oden, NW NE NW section 5-21-7w, and same operator's No. 2 Oden, SW SE NW section 5-21-7w, locations; Sinclair Prairie Oil Co. No. 1 Ramsey, SW cor. section 7-21-6w, location.

Barton County

Texas Co. No. 4 Hoffman, NE NE NW section 6-16-13w, in the Barton County extension of the Trapp field, pumped 173 bbls. of oil in two hours and made potential of 2,085 bbls. Top of Siliceous lime was 3,350 feet, and it was bottomed at 3,375 feet.

Stanolind Oil & Gas Co. No. 4 Riemann, NW cor. section 34-16-13w, found Siliceous lime at 3,390 feet, total depth 3,395 feet and made potential of 1,944 bbls. of oil. It is on the north side of the Ainsworth pool.

Cities Service Oil Co. No. 1 Hogan, NW SE NW section 11-17-11w, topped Siliceous lime at 3,345 feet and was completed at 3,361 feet, total depth. After treating with 3,000 gallons of acid, it pumped 101 bbls. of oil the first four hours, 154 bbls. the next four hours and made potential of 603 bbls.

New work in Barton County: Tom Palmer and associates No. 1 Polzin, NW NW SE section 4-16-12w, wildcat north of the Beaver pool, cellar; Phillips Petroleum Co. No. 2 Bitter, SE NE NE section 6-16-13w, set 10-inch casing at 597 feet; Stanolind Oil & Gas Co. No. 7 Riemann, SE NW NW section 34-16-13w, rigging up rotary; Shell Petroleum Corp. No. 1 Schneider B, NE NE NW section 1-16-14w, building rig; same company's No. 2 Krautwurst, NE NE NW section 10-17-11w, set 10-inch casing at 311 feet, waiting on cement at 325 feet; Cities Service Oil Co. No. 2 Hogan, SW SE NW section 11-17-11w, location; Arch Merriam and others No. 1 Norris, NE NE NW section 33-17-11w, wildcat west of the Bloomer field, location; Stanolind Oil & Gas Co. No. 2 Schartz, SE SE NW section 2-20-11w, rigging up rotary;

These

DOW CHEMICALS

ARE LEADERS IN THE

Oil Industry

CAUSTIC SODA • PHENOL

CARBON TETRACHLORIDE
99·9%

ETHYLENE DICHLORIDE

CALCIUM CHLORIDE • ANILINE OIL

DOWTHERM *(Heat Transfer Medium)*

Through the years Dow chemicals have earned a genuine respect for their consistent quality and utter dependability.

Only the actual experience of working with Dow chemicals will convey the full significance of their leadership as products serving the oil industry.

Let Dow quote you on your needs — let Dow show you the extent of its service — and let the products prove for themselves a superiority that you will welcome.

THE DOW CHEMICAL COMPANY, Midland, Michigan • *Branch Sales Offices:* 30 Rockefeller Plaza, New York City — Second and Madison Streets, St. Louis — 135 South La Salle Street, Chicago

DOW

same company's No. 3 Schartz A, NE NE NW section 2-20-11w, rigging up rotary; same company's No. 1 Rose, SE SE NE section 3-20-11w, rig; same company's No. 1 Stuckemann, NE NE SW section 11-20-11w, rigging up rotary; Lario Oil & Gas Co. and Atlantic Refining Co. No. 2 Zahorsky B, SE SE NE section 23-20-11w, cellar; Gulf Oil Corp. No. 4 Sessler, CNL SW section 24-20-11w, building rig; Indian Territory Illuminating Oil Co. No. 2 Hoffman, NW NE NE section 1-16-14w rig; Stanolind Oil & Gas Co. No. 1 Morrison A, SW cor. section 27-16-13w, location; same company's No. 3 Arensdorf, SE SE NW section 2-20-11w, rig; same company's No. 4 Fanning, NW NW NE section 2-20-11w, location; Gulf Oil Corp. No. 3 Sessler, C S half N half SW section 24-20-11w, location; Indian Territory Illuminating Oil Co. No. 3 Sessler, SE SE SW section 24-20-11w, rig; Magnolia Petroleum Co. No. 14 Roetzel, SW SW SE section 24-20-11w, location.

Reno County

Olson Drilling Co. and Shell Petroleum Corp. No. 6 Fast, SE SE NE section 25-23-4w, Burrton area, Reno County, produced 19 bbls. of oil after acid treatment but water predominated and it was abandoned. Top of Chat was 3,269 feet, total depth 3,392 feet.

Transwestern Oil Co. and Sinclair Prairie Oil Co. No. 1 Teten, NW NW SE section 12-23-4w, was a cellar. Magnolia Petroleum Co. and others No. 1 Thome, SE NE NE section 17-26-4w, was a rig.

Cowley County

Another large producer was registered in the Weathered pool of Cowley County at Lloyd, Frost & Study and others No. 2 Monforte, SW SW SE section 33-31-3e. It had Siliceous lime at 3,205-54 feet, total depth, flowed 403 bbls. of oil in four hours and made potential of 2,418 bbls.

Earl Wakefield No. 2 Wilson, NE NE NW section 4-32-3e, topped Kansas City lime at 2,455 feet, had pay at 2,475 feet and was bottomed at 2,554 feet. It pumped 157 bbls. of oil the first four hours, making potential of 712 bbls. of 39-gravity oil.

E. B. Shawver No. 2 Baruth, NW NW NE section 8-34-3e, topped Bartlesville sand at 3,281 feet, had pay at 3,301-16 feet, total depth, and made potential of 156 bbls. of oil.

Pryor & Lockhart and others No. 1 Schwantes, SW SW NE section 16-33-3e, was dry and abandoned in Mississippi lime at 3,196-3,217 feet, total depth.

New work in Cowley County: E. B. Shawver No. 2 fee, NE NE SE section 3-30-4, location; Arthur Brewer No. 1 Starkey, SW SW NE section 16-30-4, wildcat, drilling at 1,550 feet; Lloyd, Frost & Study and others No. 1-K Wilson, SE SE SW section 33-31-3e, rig; E. B. Shawver No. 1 Baruth, SE SE SW section 5-34-3e, rig; Deep Rock Oil Corp. No. 2 Cranston, section 30-32-6, rig.

Harvey County

Olson Drilling Co. and Lario Oil & Gas Co. No. 2 Murphy, NW SW SE section 30-23-3w, Harvey County sector of the Burrton field, topped Chat at 3,274 feet, total depth 3,362 feet, was acidized and made potential of 544 bbls. of oil.

Olson Drilling Co. and Shell Petroleum Corp. No. 3 Schrag, Jr., SE SE SW section 30-23-3w, was acidized and made potential of 1,065 bbls. of oil from Chat topped at 3,267 feet, total depth 3,360 feet.

Sunray Oil Co. No. 2 Hege, NW NW SW section 13-22-2w, Harvey County, was a location. Olson Drilling Co. and Shell Petroleum Corp. No. 4 Schrag, Jr., 330 feet north and 1,020 feet west of south quarter corner, section 30-23-3w, location; same operator's No. 1 J. C. Schrag, NW NW NE section 31-23-3w, location.

Stafford County

Skelly Oil Co. and associates No. 1 Kipp, SW SW SE section 23-25-14w, Stafford County, topped Kansas City lime at 3,750 feet, was bottomed at 3,811 feet and was dry and abandoned.

Stanolind Oil & Gas Co. No. 4 Spangenberg, SW NW SW section 29-22-11w, Stafford County, was a rig. Same company's No. 10 Komarek, NE SE NE section 30-22-11w, was a rig. Fred P. Rust and others No. 1 Johnson, NW NW SW section 29-25-12w, wildcat, was drilling at 1,800 feet.

Atlantic Refining Co. No. 1 Ziegenbusch, SE cor. section 28-21-12w, Stafford County, was a rig. Stanolind Oil & Gas Co. No. 3 Spangenberg, NW SW NW section 29-22-11w, was drilling. Same operator's No. 4 Allen, NW NE SE section 31-22-11w, was a rig.

Rooks County

Leavell Coal Co. No. 2 Baxa, NW SW NW section 12-9s-17w, Rooks County, topped Kansas City lime at 3,143 feet, total depth 3,355 feet, pumped 397 bbls. of oil in eight hours and made potential of 794 bbls. It was treated with 6,000 gallons of acid.

Atlantic Refining Co. No. 2 McClay, CNL SW section 12-9s-17w, was a new Rooks County location.

Ellsworth County

Transwestern Oil Co. and others No. 1 Stumps, SW cor. section 33-17-10w, Ellsworth County, had Siliceous lime at 3,248 feet, pay at 3,265 feet, total depth 3,267 feet. It was acidized, pumped 210 bbls. of oil in 15 hours, and later made potential of 504 bbls. of oil, with 18 per cent water.

Hinkle and associates No. 1-A Andrea, NE NE SE section 7-17-10w, Ellsworth County wildcat, was a location.

Butler County

Cities Service Oil Co. No. 28 Lathrop, C SW NW section 17-23-4e, Elbing pool, Butler County, found Kansas City lime at 1,957 feet, was bottomed at 2,091 feet, treated with acid and made potential of 366 bbls. of oil.

Magnolia Petroleum Co. No. 9 Anderson, section 9-27-4, an old Butler County well, was being deepened.

Barber County

Barbara Oil Co. No. 1-15 Root, C NE section 15-33-13w, Barber County, was an abandoned rig.

Barbara Oil Co. No. 1 Holmes B, C NE section 22-33-13w, was a cellar.

Chautauqua County

Sinclair Prairie Oil Co. No. 49 Casement, C N half S half SE section 32-33-11, Chautauqua County, topped Mississippi lime at 1,821 feet, total depth 1,890 feet, and produced 750,000 feet of gas.

Skiles and others No. 1 Miller, SE cor. section 1-33-11, was location for a new Chautauqua County test.

Elk County

J. C. Way No. 1 Teyrill, SW cor. section 12-31-9, Elk County, topped Mississippi lime at 2,295 feet, total depth

(Continued on Page 99)

THE SINGLE SOLVENT
AND SHARPLES
CENTRIFUGAL ACID TREATING

Every refiner knows there is no one best method for refining all lubricating oils. In our experience, however, many oils, especially distillates high in asphalt, are best handled as follows:

A single solvent treat.
Sharples centrifugal acid treat.
Neutralization with contact clay.

This procedure avoids expensive percolation or loss of paraffinics through over-solvent treatment in search of quality. It gives desired quality with maximum yield and minimum cost per unit of finished oil. Such acid treatments by gravity are frequently troublesome or unworkable. With Sharples Centrifugal Acid Treating, uniformly successful results with maximum recovery are secured.

Sharples engineers are glad to study and report on individual oils for those interested.

THE SHARPLES SPECIALTY COMPANY · PHILADELPHIA · PA.

East and East Central Texas

CONDITIONS IN EAST TEXAS PRESENT KNOTTY PROBLEM

By L. E. BREDBERG

DALLAS, Tex., Sept. 20.—Daily average production in the East Texas field for the week ending September 15, ran around 476,752 bbls. whereas during the same period distribution was 15,714 bbls. per day less, the surplus going to storage in the field.

The report on bottom hole pressures for the past month was completed in time for the commission's hearing on Monday, and the drop in pressure was almost as great as announced last month when it was reported at 13 pounds. Some engineers say that the pressure decline is not out of line. Others take it seriously.

The salt water report for the period has not been compiled but will be put out in about two weeks according to those working on it, but the amount of water reported as being produced is not considered high in comparison to the amount of oil that has been withdrawn from the field by the vast number of producing wells. However, there probably is plenty of salt water production that is not reported, but is being run into pits and evaporated, or run down ravines and creek beds. In a field covering over 130,000 acres, including over 23,500 wells, it would take an army to check and report on each well as to whether or not it is producing, and if so, whether on pump or flowing, and the amount of water produced each day from every well making water. The problem of checking "by-passing" of oil in the field has come up, with authorities uncovering a number of such by-passes, supposedly used in the overproduction of wells, which leads to the belief that considerable oil may be produced each month over the allowable set by the commission.

Exception permits are being granted in many instances as one city block in the city of Kilgore will readily show. Four wells now drilling in that block have their derrick legs resting against each other and a fifth well stands about 30 feet distant. A total of six tests are being drilled on the one city block. Close spacing of wells is causing the present rate of drilling and the maintenance of a rate far above that anticipated by major companies in the first of the year when they expected to curtail their drilling operations.

Only five wells were reported completed on pump in the past week in the East Texas field, the weekly average holding to about this level. One engineer who is well acquainted with the field said that no doubt many wells were not reported as pumpers or "dead" wells, their daily allowable being taken from other wells on the lease to save the cost of pumping. He also said that there were many edge wells in the field not able to make even the daily marginal allowable of 20 bbls., but it was hardly possible to locate and report on all of these.

Wildcatting

The Humble Oil & Refining Co. has spudded in a second wildcat test on its block in the Jarvis area in eastern Anderson County. It is on the Southern Pine Lumber Co. lands in the John Motor Survey, and will seek production in the Trinity. The recent test made in the area, on the Susie Hassell farm, proved a failure in the Woodbine and was not carried beyond that series.

Another test slated for the county is that of the American Liberty Oil Co. on the Hembly farm in the T. N. Lively Survey. It will fall southwest of Elkhart, just north of the county line and not far from where the C. & G. Oil Co. recently abandoned a Woodbine test.

J. K. Hughes is rigging up a test southeast of Kirvin in Freestone County, on the I. S. Foster lands in the C. E. Gary Survey. It will be drilled in quest of Woodbine production.

In Hopkins County, V. A. Hughes staked location for a wildcat on a good sized block 3 miles east of Ridgeway. It will be known as No. 1 B. & T. Hardaway, in the William A. Irwin Survey.

Cherokee County will be given a 6,000-foot test on the Chronister Lumber Co. lands in the John Durst Survey, about 15 miles southeast of the Rusk pool and in the southeastern part of the county. E. H. Moore, Inc., of Oklahoma will drill this Woodbine sand test, with King Drilling Co. as contractors. The company holds a three-quarter interest in the 8,000-acre block on which the test will be located, and the Gardner Petroleum Corp. and Alex Johnson hold the remaining interest. Alex Johnson also holds about 7,000 acres in the general area surrounding the block.

The Nivla Oil Co. abandoned its Trinity test 2½ miles southeast of Henderson in southern Rusk County, at a total depth of 6,802 feet. Elevation is 471 feet. It was located on lands of the Citizens National Bank in the M. D. Carmel Survey.

EAST CENTRAL TEXAS COMPLETIONS

Falls County

M. Hays and others No. 1 J. J. Hughes, dry and abandoned, 1,567 feet, 5 miles SW of Lott.

Franklin County

Humble Oil & Refining Co. No. 3 Wimms, 4,319 feet, 339 bbls. per day on pump. Magnolia Petroleum Co. No. 8 Owings, 4,177-4,272 feet, 342 bbls. on pump. The Texas Co. No. 4 Barker, 4,253-71 feet, 577 bbls. per day, pumping and flowing.

Hopkins County

W. Goldston No. 20 Smith, 4,500-27 feet, 149 bbls. per day.

Rusk County

Nivla Oil Co. No. 1 Citizens National Bank, dry and abandoned, 6,802 feet, 2½ miles SE of Henderson, elevation, 471 feet.

Titus County

B. G. Byars No. 2-B Belcher, 4,243-4-310 feet, 270 bbls. on pump. Humble Oil & Refining Co. No. 5 Batson, 4,184-4,331 feet, 485 bls. on pump; No. 5 Riddle, 4,152-4,312 feet, 106 bbls. on pump. Magnolia Petroleum Co. No. 11 Crawford, 4,168-4,310 feet, 175 bbls. oil and 110 bbls. water on pump; No. 12 Crawford, 4,277 feet, 189 bbls. in 24 hours. O'Neal and Rotundi No. 2-B Edwards, 4,280-4,320 feet, 192 bbls. on pump. Tide Water Associated No. 9 Carr, 4,144-4,206 feet, 175 bbls. oil and 175 bbls. water on pump.

EAST TEXAS COMPLETIONS

Gregg County

Atlantic Refining Co. No. 24 Duncan, 3,594-3,760 feet, 50 bbls. per hour; No. 7 George, 3,498-3,590 feet, 105 bbls. per hour; No. 15 Nicholson, 3,654-3,734 feet, 40 bbls. per hour; No. 12-A Satterwhite, 3,646-3,750 feet, 65 bbls. per hour. Collins and others No. 13 Fisher, 3,413-40 feet, 15 bbls. in 15 minutes. Deep Rock Oil Co. No. 23 Jones, 3,593-3,650 feet, 20 bbls. in 15 minutes. C. G. & M. E. Glasscock No. 1 Bacle, 3,631-40 feet, 30 bbls. in 15 minutes. Humble Oil & Rfg. Co. No. 12 Clements, 3,520-3,616 feet, 50 bbls. per hour; No. 17 Hughes, 3,604-12 feet, 50 bbls. per hour; No. 10 Wells, 3,655-58 feet, 38 bbls. per hour. J. Long Drilling Co. No. 25-A Owens, 3,559-70 feet, 31 bbls. in 30 minutes. Magnolia Petroleum Co. No. 13 Davis, 3,586-3,600 feet, 102 bbls. per hour; No. 9 McKinley, 3,636-50 feet, 100 bbls. per hour; Stanolind Oil & Gas Co. No. 4-B Farley, 3,584-3,650 feet, 70 bbls. per hour; No. 6 Jones, 3,615-74 feet, 54 bbls. per hour. Sun Oil Co. No. 15 McKinley, 3,627-31 feet, 30 bbls. in 30 minutes. Tide Water Associated No. 44 Lake Devernia, 3,495-3,530 feet, 13 bbls. in 10 minutes. Tide Water and others No. 19 Flewellen, 3,640-58 feet, 7 bbls. in 10 minutes. W. & R. Investment Co. No. 3 Nene, 3,529-79 feet, 50 bls. per hour. Western States No. 5 Booknight, 3,635-47 feet, 65 bbls. per hour. American Liberty Oil Co. No. 12-A Weiss, 3,572-79 feet, 85 bbls. per hour. Hamil & Smith No. 1 Butts, 3,541-68 feet, 60 bbls. per hour. Hasting and Dodson No. 2 Boatwright, 3,524 feet, 200 bbls. in 5 hours. Magnolia Petroleum Co. No 5 Goyne, 3,592-3,604 feet, 100 bbls. per hour. Sinclair Prairie Oil Co. No. 25 Lockhart, 3,596-3,608 feet, 30 bbls. per hour. W. C. Turnbow No. 7 Clary, 3,554-63 feet, 11 bbls. in 2 hours on pump.

Rusk County

Abercombie and Harrison No. 5-A Brightwell, 3,659-88 feet, 95 bbls. per hour. Magnolia Petroleum Co. No. 14 Wells, 3,687-3,709 feet, 200 bbls. in 2 hours on pump. Atlantic Refining Co. No. 44 Kinney, 3,588-3,678 feet, 35 bbls. per hour. British American Oil Co. No. 15 Kangerga, 3,593-94 feet, 42 bbls. per hour. G.B.R. Oil Co. No. 7 Harman, 3,736-50 feet, 10 bbls. per hour. Gulf Oil Corp. No. 15 Cashen, 3,791-95 feet, 55 bbls. per hour. Humble Oil & Refining Co. No. 22 Box, 3,700-78 feet, 20 bbls. in 20 minutes; No. 10 Pitner, 3,642-93 feet, 70 bbls. per hour; No. 34 Wooley, 3,656-3,734 feet, 75 bbls. per hour. Hunt Oil Co. No. 13-F Bradford, 3,520-3,603 feet, 20 bbls. in 3 hours on pump; No. 34-C Fair, 3,620-30 feet, 23 bbls. in 10 minutes. Sinclair Prairie Oil Co. No. 13-A Wilson, 3,632-44 feet, 60 bbls. per hour. J. B. Sneed and others No. 1-A Rollins, 3,680-82 feet, 25 bbls. in 30 minutes. L. Sneed Oil Co. No. 1-B Harmon, 3,644-49 feet, 60 bbls. in 40 minutes. The Texas Co. No. 10 Stone, 3,658-64 feet, 20 bbls. in 25 minutes.

Smith County

Sells Petroleum Co. No. 10 Wilson, 3,766-67 feet, 20 bbls. in 15 minutes. Sun Oil Co. No. 1-B Henderson, 3,755-56 feet, 20 bbls. in 18 hours on pump.

Upshur County

D. P. Dean and others No. 1 Porter, 3,718-19 feet, 25 bbls. in 40 minutes. General American Oil Co. No. 22-A Sanders, 3,582-95 feet, 30 bbls. in 40 minutes; No. 4-C Sanders, 3,655-59 feet, 35 bbls. in 30 minutes. Rudco Oil & Gas Co. No. 1 Nicholson, 3,713-18 feet, 20 bbls. in 30 minutes. Stanolind and others No. 15-A Flewellen, 3,757-74 feet, 27 bbls. per hour. Sun Oil Co. No. 5 Medlin, 3,743-49 feet, 20 bbls. in 24 hours on pump, 80 per cent salt water.

New Alberta Regulations

With a view to stimulating actual exploration work and discouraging the speculative holding of potential oil lands, the Alberta, Canada, government has adopted new regulations governing the issuance of prospecting permits for oil and gas. Under the new regulations, reservations of petroleum and natural gas rights may be obtained for an area not less than 10,000 and not more than 50,000 acres, this including such rights as could become a government reserve. Payment of 5 cents an acre must accompany the application. Within 45 days from the date of application the grantee is to furnish a preliminary geological report on the tract, with data as to the extent and cost of this examination, evidence of the employment of qualified personnel to complete it, date when operations are to commence and evidence of the financial ability of the applicant to complete the undertaking.

Upon receipt of this data the reservation will be extended a further 45 days, within which the applicant must furnish the name of the geologist or company engaged to make the examination, the number of men employed, the date of commencing operations and the approximate date of completion. If the geological work is not completed within the 45 days, the reservation may be continued a further three months if the applicant files monthly progress reports.

These vital oil books

control your future. For complete and up-to-the-minute facts you must have The Oil and Gas Journal. But for vital "background" information you need also these standard texts on every phase of the oil industry. Read the books on your branch of the business—and watch your income grow as you apply these dependable facts.

It costs you nothing to get complete information on any book in the list. Merely write the number of each title on the coupon and mail the coupon to us promptly, and full facts about each book will be mailed you at once without any obligation.

For your own practical profit, check this authoritative list right now and then mail the coupon.

Title	Author	Prepaid Price
2. Accounts of an Oil Company, by Humphreys		2.00
4. American Petroleum Refining, by Bell		6.00
5. Analytical Principles of the Production of Oil, Gas, and Water From Wells, by Herold		7.50
6. Asphalts and Allied Substances, by Abraham		10.00
7. Brown's Directory of American Gas Companies		20.00
8. Catalytic Oxidation of Organic Compounds in the Vapor Phase, by Marek & Hahn		9.00
9. Chemical Annual		5.00
10. Chemical Engineer's Handbook, by Perry		9.00
11. Chemical Formulary		6.00
12. Chemical Guidebook		3.00
13. Chemical Refining of Petroleum, by Kalichevsky & Stagner		7.00
14. Chemistry and Technology of Cracking, by Sachanen & Tilicheyev		8.00
15. Chemistry of Petroleum Derivatives, by Ellis		18.00
16. Chemistry of Synthetic Resins, by Ellis		19.50
17. Condensed Chemical Dictionary		10.00
18. Corrosion: Causes and Prevention, by Speller		7.00
19. Covenants Implied in Oil and Gas Leases, by Merrill		7.50
20. Cyclopedia of Oil and Gas Forms, by Benoit		10.00
22. Deep Borehole Surveys & Problems, by Haddock		4.00
23. Diesel Engineering Handbook, by Morrison		5.00
24. Earth Oil, by Egloff		1.00
26. Elements of Diesel Engineering, by Adams		4.00
27. Elements of Fractional Distillation, by Robinson		3.00
28. Element of Geophysics, by Ambronn		5.00
30. Field Geology, by Lahee		5.00
31. Field Methods in Petroleum Geology, by Cox, Drake & Muilenburg		4.00
32. Gas Engineers' Handbook		7.50
34. General Engineering Handbook, by O'Rourke		4.00
35. Geologic Structures, by Willis		4.00
36. Geology of Natural Gas (A.A.P.G.)		6.00
37. Geology of Petroleum, by Emmons		6.00
38. Geology of Petroleum and Natural Gas, by Lilley		6.00
39. Geology of Texas, by Sellards		7.00
40. Geophysical Prospecting		5.00
41. Handbook of Butane-Propane Gases		5.00
42. Handbook of Chemistry and Physics, by Hodgman		6.00
43. Heat Transmission, by McAdams		5.00
44. Hydrogenation, by Ellis		15.00
46. Increasing the Recovery of Petroleum, by Osgood		10.00
48. Law of Oil and Gas, by Thornton (6 Volumes)		45.00
49. Manual of Electric Arc Welding		2.00
51. Mechanical Engineers' Handbook, by Marks		$ 7.00
52. Merchandising of Petroleum Products, by Thomas		2.50
53. Mid-Continent Oil and Gas Forms		7.50
54. Motor Fuels, by Leslie		11.00
55. Natural Gas Handbook, by Diehl		5.00
56. Oil and Gas Royalties, by Glassmire		3.00
57. Oil Economics, by Osborn		4.00
58. Oil Fields in the United States, by Ver Wiebe		6.00
59. Oil Royalties, by Reeser		3.00
60. Oil Tankers, by Morrell		4.00
61. Oxy-Acetylene Welder's Handbook		2.00
62. Oil Well Completion and Operation, by George		3.00
63. Petroleum Dictionary, by Porter		3.00
64. Petroleum Facts and Figures		2.00
65. Petroleum in the United States and Possessions, by Arnold & Kemnitzer		6.00
66. Petroleum Production Engineering, by Uren		5.00
67. Petroleum Refinery Engineering, by Nelson		6.00
68. Petroleum Register (directory)		10.00
69. Practical Oil Geology, by Hager		3.00
70. Practice of Lubrication, by Thomsen		6.00
72. Problems of Petroleum Geology		6.00
73. Procedure Handbook of Arc Welding Design and Practice		1.50
74. Pyrolysis of Carbon Compounds, by Hurd		9.50
76. Scientific Principles of Petroleum Technology, by Gurwitsch		9.00
77. Seismographing for Oil, by E. G. McKinney		1.00
78. Structure of Typical American Oil Fields		14.00
79. Termites and Termite Control, by Kofoid		5.00
81. Welding Encyclopedia		5.00

Book Department
THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Please send me complete facts on the books numbered

.....

It is agreed that this does not obligate me in any way.

NAME.....

STREET ADDRESS.....

CITY..... STATE.....

Texas and Louisiana Gulf

NEW PAY FOUND ON CONROE TREND IN SOUTH LOUISIANA

By
F. L. SINGLETON

HOUSTON, Tex., Sept. 20.—Prospects of another oil field being opened along the Conroe trend in western Newton County, Tex., and the confirmation of a new field along the same trend in Coastal Louisiana, together with the opening of new sands in several proven fields featured the developments along the Gulf Coast district the past week.

The first production for Newton County and the fourth oil field to be opened along the Conroe trend during the past nine months has been indicated by Houston Oil Co. and Republic Producing Co. No. 1 Peavy Moore Lumber Co. which is preparing for a production test at 6,987 feet after showing for a producer on a drill stem test. This test lasting 18 minutes was made at 6,775-6,927 feet through a quarter-inch choke, top and bottom, showed 100 pounds of working pressure, 180 feet of 38 gravity oil and 540 feet of oily drilling mud. A core record in the upper Cockfield horizon is as follows: at 6,907-10 feet shale with streaks of sand with an oil odor; 6,910-12 feet, sand carrying oil; 6,912-22 feet, shale with no showing, and at 6,922-27 feet, sand and shale carrying an oil odor. Following the test the hole was cored deeper in search of the lower Conroe sand which was found, but it did not look promising. Salt water sand was topped at 7,029 feet and was cored to a total depth of 7,069 feet before the hole was plugged back to 6,987 feet at which point 7-inch casing has been cemented.

Number 1 Peavy Moore is situated on what is known as the South Call area in section 42 of the H.&T.C. Survey on a block of several thousand acres owned jointly by the two companies. These two companies several years ago purchased several hundred thousand acres, the majority being fee acreage which extends through the entire northeastern sector of the Conroe trend. Should the well make a producer it will be the third discovery to be made by these two companies this year, the other two being located to the southwest at Silsbee in Hardin County and to the northwest in Tyler County, referred to as Spurger or Joes Lake.

Continental's Discovery

Approximately 150 miles northeast, and located at the Villa Platte Prospect, northeastern Evangeline Parish in Coastal Louisiana, Continental Oil Co. No. 1 Tate has been completed for an initial production of 10 bbls. per hour through a three-sixteenths inch choke with tubing and casing pressure equalized at 2,250 pounds. Production is from perforations at 9,007-35 feet. A 60-foot section of broken sand and shale was cored last week at 8,970-9,030 feet and 7-inch casing was cemented on bottom at 9,098 feet. It was originally tested at 9,015-35 feet and came in flowing 36-gravity oil, but quit flowing when the swab was lost in the hole which resulted in the tubing being pulled and the casing being perforated at a higher level.

This is one of the most important completions ever made in the district, as it is producing from the Sparta member of the Cook Mountain horizon which heretofore has never been productive in this district. Although small production has been found from this horizon at Clay Creek and at Kittrell, the only important production was recently opened in Tyler County, Texas, located approximately 150 miles to the southwest, consequently this entire trend is expected to be affected by deeper exploration.

Gulf's Important Test

In the southeastern sector of this district, Gulf Oil Corp. was preparing to test its highly important wildcat at Timbalier Bay in southern Lafourche Parish which is assured of opening a new pool. Having drilled to a total depth of 7,269 feet, No. 3 State has been plugged back to 6,971 feet and 7-inch casing has been cemented on bottom. Production test will probably be made at 6,958-70 feet, where a drill stem test showed 2,000 feet of pipe line oil. Another sand at 6,749-6,846 feet also showed 1,600 feet of 32 gravity oil on a drill stem test two weeks ago. The prospect is located on a block of several thousand acres centering in section 36-23s-21e.

Prospects of a 10,000-foot producing horizon in the Jeanerette field, St. Mary Parish, was a possibility by the showing of Herton Oil Co. No. 1 Banta-Roanes, which is reported to have found oil sand at intervals from 10,000 to 450 feet. The hole is being cored ahead and if no further showings are encountered, the above section is to be tested through perforations. Location is in section 40-13s-9e.

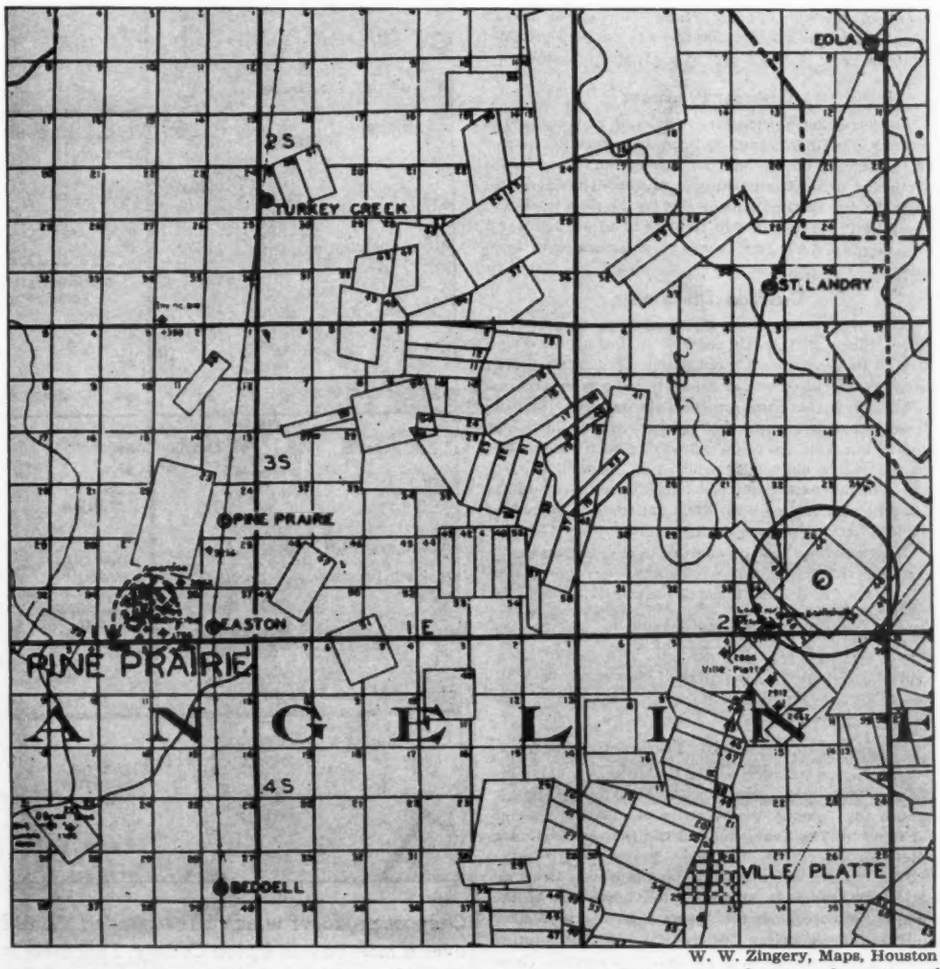
A second producing horizon in the Spurger field, Tyler County was opened by Republic Production Co. and Houston Oil Co. No. 4 Hurd. Perforations were made in the 5-inch liner at 7,700-04 feet and it flowed 520 bbls. per day through a quarter-inch choke with tubing pressure 1,025 pounds and casing pressure 1,000 pounds. A previous production test in the regular producing horizon at 7,651-58 feet showed salt water. It is located 933 feet north of No. 3 in the N. Hurd Survey.

In the Garwood area, southern Colorado County, Coyle and Concord No. 2 Mary South, section 41, I.&G.N. Survey has been completed. It is a distillate producer. Bottomed in a sand section at 6,030-34 feet, the well flowed an estimated 2 to 3 bbls. of fluid per hour of which 25 per cent was distillate and the balance wash water. It was washed in through a three-thirty-second-inch coke showing 2,000 pounds pressure on the tubing and 2,025 pounds on the casing. When turned into the separator, it was reported to be flowing from 3 to 4 barrels of clear distillate per hour. It offsets a recent dry hole drilled by Sterling Oil and Refining Co. and is about the tenth well drilled on the structure.

On the west side of the Keeran field, Victoria County, Union Oil Co. No. 6 Keeran in the M. DeLeon Survey opened a new sand when it flowed 200 bbls. per day through a 9/64-inch choke with tubing pressure 775 pounds and casing pressure 1,100 pounds. In this same county, and midway between Keeran and the Placedo field, Stanolind Oil and Gas Co. No. 1 Henderson and Pickering, E. Benavides Survey, is coring shale below 5,217 feet after testing gas on a drill stem test at 4,786-92 feet which compares with the Heterostegina section, productive at Placedo.

Flanking the Old Danbury dome in Brazoria County and in the Henry Austin Survey, Rowan Drilling Co.

(Continued on Page 99)



W. W. Zingery, Maps, Houston

Villa Platte area, northeastern Evangeline Parish, Coastal Louisiana, showing location of new discovery opened by Continental Oil Co. No. 1 Tate

West and North Texas

By
L. E. BREDBERG

SOUTHERN COUNTIES RECEIVE ATTENTION OF WILDCATTERS

FORT WORTH, Tex., Sept. 20.—Extension of pools, new oil discoveries, and new wildcat locations, three of which were in the southern part of the West Texas district, one of which is to be an Ordovician test, combined in the past week to maintain the interest level in the West Texas district.

The northern tier of counties in the district has been monopolizing the center of the stage, for the past year or more, wildcat discoveries and extensions in those counties having increased the trend of developments in the sector each month. This week an important location was announced for the southeastern part of the district, Tom Green County. The Humble Oil & Refining Co., which has a block of 38,000 acres in the western part of the county and extending into Irion County, staked location for an Ordovician test, which it expects to drill to 6,500 or 7,000 feet. The location falls on the Lewis and Wardlaw Ranch, in section 5, Block 17, H.&T.C. Survey, about 3 miles northwest of the town of Tankersley.

Two other tests scheduled for that part of the district fall in Coke and Concho counties. Barnett Petroleum Corp. is to drill in section 39, Block W, T.&P. Survey, in the former county, and Sam Murray will drill in the latter county, on the R. G. Armor Ranch, in section 105 T.&N.O. Survey. One other test is now drilling in Coke County, but it has been some time since a test has been put down in Concho, where showings of oil and considerable gas has been produced in previously drilled wildcats, none of which proved commercial producers.

Outpost Producer

In the northern part of the district, P. N. Wiggins and others No. 1 Carrie Slaughter Dean, in Labour 26, League 92, Lipscomb County School Lands Survey, 4 miles northwest of Cochran County's first pool opener, was treated with 1,500 gallons of acid in the past week and swabbed at the rate of 8 to 10 bbls. of oil per hour at a total depth of 5,033 feet. It will be reacidized with 3,000 gallons.

Dawson Discovery

E. L. Wilson and others No. 1 Scanlan, located in section 8, Block M, E.L.R.R. Survey, in the northwestern part of Dawson County, and about 4 miles west of a small pumper discovery of Albaugh and others, pumped 5 bbls. of oil per hour for the first day, but then declined. What caused the decreases in production is not known, but rods are to be pulled to find if mechanical trouble was to blame. Total depth of this well is 4,933 feet, plugged back from 4,966 feet to shut off sulfur water. It was treated with 5,000 gallons of acid before cleaning out and putting on the pump.

The discovery leads to the prospect of a test on the Stanolind Oil & Gas Co's. large block in and around the old dry Cedar Lake in northeastern Gaines County, 4 to 5 miles southwest of the new discovery. The Wilson well is believed to be on the eastern or northeastern edge of the geophysical "high" in that sector, consequently a test on the Cedar Lake block would be of utmost interest to those holding adjacent acreage to either block.

Locations in Yoakum

The western part of Yoakum County received a number of wildcat and outpost locations in the past week, because the recently discovered areas around Bohago and Bond by The Texas Co. and the Denver Producing & Refining Co.

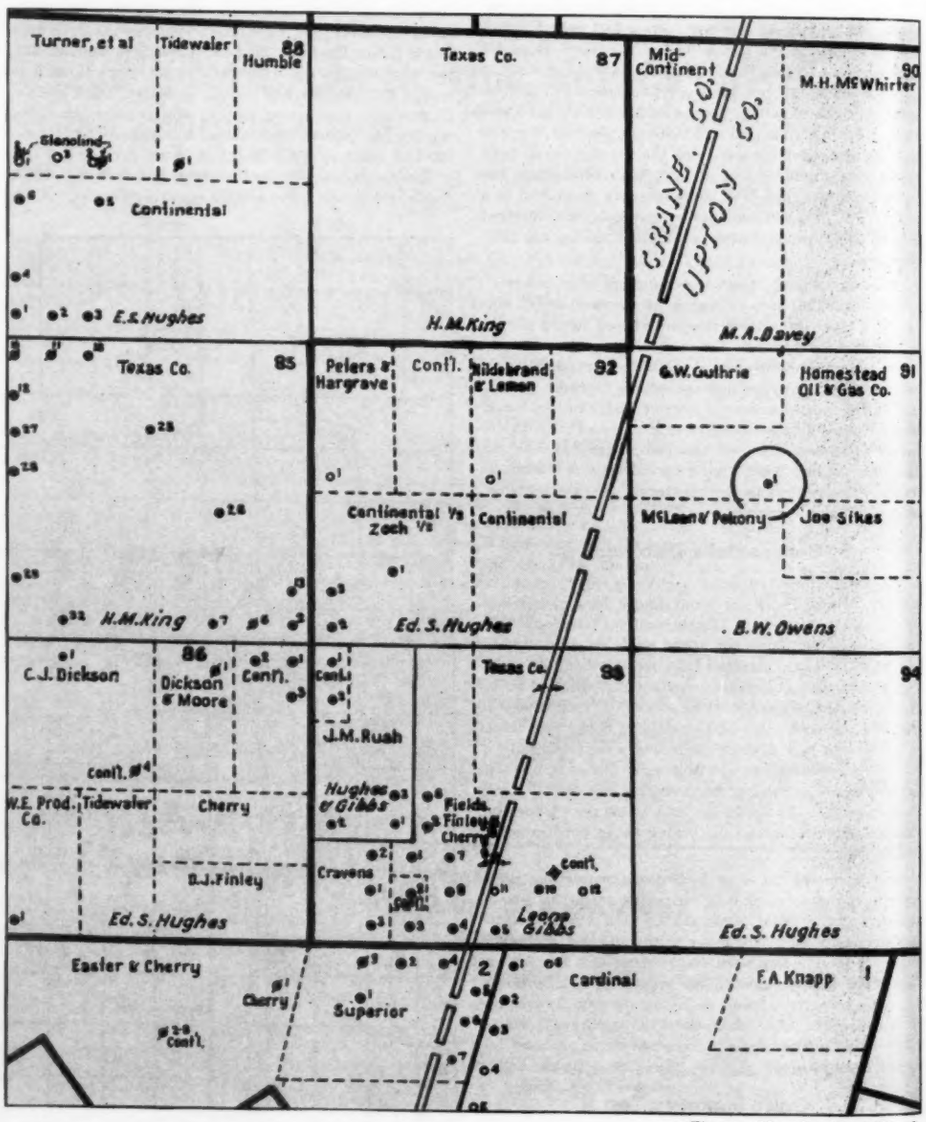
J. L. Green made a location on the Nevels lands, in section 709, Block D, about 3 miles northwest of the potential discovery of the Texas Co. on the Walker lands, and the American Liberty Oil Co. made a location about 1½ miles northeast of the Denver discovery. These tests are in the southwestern corner of Yoakum County. Skelly Oil Co. and the Sun Oil Co. are to drill a jointly owned test on the Kiser lands, in section 640, Block D, about 1 mile southwest of the Bohago discovery, in the same part of the county, and J. W. Murchison is also to drill one in section 832, Block D.

The wildcat test of Lou Stogner and others in Yoakum County, is to be in the northwestern corner of the county, the first test ever drilled thereabouts. Location is on the J. A. Blade lands, in section 103, Block D, John H. Gibson Survey, about 3 miles from the Cochran County line.

Harper Extensions

The Harper field in Gaines County, opened several years ago, but which has seen little development until recently, is being expanded more and more as outpost wells prove up additional acreage, and new locations are staked for more tests. L. H. Wentz No. 1 Paul Moss, section 28, Block 44, Township 2s, T.&P. Survey, extended the field another 2 miles to the west and another test, that of Broderick & Calvert, extended the field a half mile to the north. The Wentz well is drilling deeper, below 4,155 feet, and flowing 220 bbls. of oil in 24 hours while drilling. The latter mentioned test flowed 120 bbls. of oil in 20 hours at 4,325 feet, but is now being acidized to increase its production. It is located in section 23, same block and survey in which the Wentz well is located.

A deal has been made between Elliott Cowden, land owner, who holds potential producing acreage in the field, and the Oil Well Drilling Co., Inc., which calls for



Zingery Map Co., Fort Worth

Outpost producer which has extended the old Hughes pool on the Crane-Upton County line, over a mile east in Upton County. This area is north of McCamey about 4 miles. Acid has played an important part in stimulating drilling and consequent expansion of the old Permian lime field which was previously considered fully developed and in a greatly depleted stage

the drilling of eight wells in the NW quarter of section 23, Block 44, Township 2s, T.&P. Survey, which will increase the development in the field considerably.

The Mid-Continent Petroleum Corp. is extending the Foster field near Odessa, in the eastern part of Ector County, another mile to the south, with its No. 1 W. Hinkley, in section 29, Block 42, Township 2s, T.&P. Survey. It is drilling ahead below 4,315 feet, with oil rising in the hole, and appears certain of making a commercial producer and expanding this field farther to the south.

Work in Gaines County

The Wasson field was defined on the south in the past week when Amerada Petroleum Corp. No. 1 Smith, NE cor. of section 382, Block G, C.C.S.D.&R.G.N.G. Survey, proved it was running far too low to make a producer, and was given up at 3,187 feet. Location is 1 mile south, plus one location west of a well completed last week in section 380, which extended the field one-half mile to the south of the Cox lands.

Phillips Petroleum Co. and Indian Territory Illuminating Oil Co. No. 1 E. C. Brand, 1½ miles northwest of the discovery well in the Wasson field, Gaines County, is appearing as a small well, if it makes even that, and is no doubt a northwest defining test to the field. It has been acidized several times but will not flow. It is also making considerable sulfur water with the small amount of oil. Total depth is 5,031 feet.

Extension in Ector

Shasta Oil Co. No. 1-D Scharbauer, in section 13, Block A, P.S.L. Survey, 1½ miles to the north of production in the Cummins-Goldsmith linking area in western Ector County, has extended that area and added still more producing acreage to the field, which is destined to prove one of the largest fields in the district. It was given a second acid treatment with 4,500 gallons at a total depth of 4,203 feet, and flowed 12 bbls. of oil per hour, making a half million feet of gas also.

This field is now about 15 miles long, from north to south, and defined on only two sides, with extensions adding more producing territory from time to time. Wells in this field generally have much higher potentials than wells in other fields in the county, which adds importance to the area, and gives it an estimated reserve far above the majority of fields in the district.

Northern Wildcat

J. O. Whittington has let contract to Mitchell & Sullivan to sink an extreme wildcat test in the southwestern corner of Bailey County, which will be the most northern test drilling in the West Texas district. Some companies carry this county in their Panhandle district reports. Location of the test is on the McElvey Investment Co. lands, in the center of Labor 12, League 162, Presidio County School Lands Survey. Rig is now being moved on to location.

New Pay for Hawley Field

The Hawley field in Jones County, about 12 miles north of Abilene, which has been producing from five pay horizons, now appears to have one more producing horizon. Ungren & Frazier, largest operators in the field, found the King sand at 2,350 feet in their No. 2-E Henry, NE cor. of Subdivision 3, Manuel Bueno Survey No. 197, and the new pay logged is about 100 feet below the Lower Hope sand, the deepest formation heretofore known in the field. The King sand pays off in the Lueders field, about 20 miles to the northeast. The well was shut down at 2,353 feet to kill and drill deeper, the hole filling with oil as it was drilled the last 3 feet. Casing will probably be run and a test made. It is a southwest outpost to the field.

T. D. Humphrey is planning on drilling a 4,000-foot test near the Jones-Shackelford County line, but in the northeastern corner of the former county. Same will be located in section 8, Block 3, H.&T.C. Survey, on the Seth Alston lands, and about 2 miles east of a test now drilling on the B. W. Thane lands. It will seek production from the Canyon lime, the pay horizon found in the Avoca field about 8 miles to the southwest.

Pipe Line Into Avoca

The Avoca field, discovered about two months ago, is to get a 4-inch pipe line outlet which is to be laid by the Humble Pipe Line Co. from the Bluff Creek field in western Shackelford County, about 10 miles to the southeast. The Humble Oil & Refining Co. has an interest in the discovery well and block on which it is located. There are four producers in the field with a number of wells drilling, several of which are outpost tests.

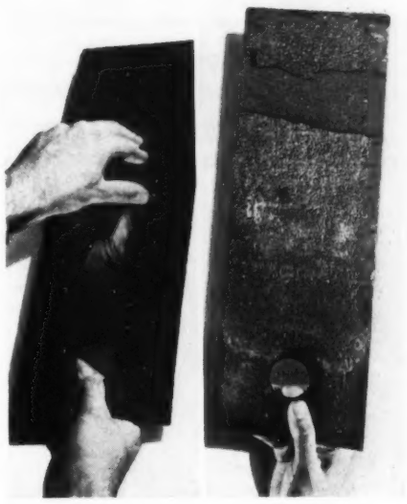
S. C. and W. L. Herring and the Owens-Snebold Oil

Bakelite Resin Coating DEFIES CORROSION *in gruelling 2-year test*

IN an unusually severe service test recently completed by H. A. Smith Pump & Motor Co., a Bakelite Resin formulation was the only coating among many types tested, that completely prevented corrosion of the steel surface to which it was applied.

This rigorous test consisted of placing panels, coated on one side only, in small, standing, out-door tanks. For two years, each panel was exposed, in continuous alternation, to: gasoline, for one week; hot sea water, one week; moist air, one week.

Illustrations show both sides of panel after two years. The uncoated side is rusted to the flaking point. The other side, coated with Bakelite Resin finish, showed no sign of corrosion, excepting at unprotected edges. This finish still retains its lustre and transparency. Through it, clean bright metal may be seen.



Panel after 2-year test in gasoline, hot sea water, moist air. (*Left*) side coated with Bakelite Resin finish. (*Right*) uncoated side.

This is one of many formulas developed by Bakelite Research Laboratories. Finishes fortified with Bakelite Resins are solving numerous painting problems. Write for detailed booklet 31S, "Bakelite Synthetic Resins".

BAKELITE CORPORATION, 247 PARK AVENUE, NEW YORK, N. Y.
BAKELITE CORPORATION OF CANADA, LTD., 163 Dufferin Street, Toronto, Ontario
West Coast: Electrical Specialty Co., Inc., 316 Eleventh Street, San Francisco, Cal.

BAKELITE

The registered trade marts shown above distinguish materials manufactured by Bakelite Corporation. Under the capital "B" is the numerical sign for infinity, or unlimited quantity. It symbolizes the infinite number of present and future uses of Bakelite Corporation's products.

SYNTHETIC RESINS

NATIONAL AIROIL BURNER COMPANY
ESTABLISHED 1912 INCORPORATED 1917

Manufacturers
Installation
Engineers
Sales - Service

Industrial Oil Burners
Gas Burners
and
Furnace Equipment

NAIROIL Automatic Oil Burners for HOMES APARTMENT HOUSES CHURCHES, STORES FACTORY BUILDINGS OFFICE BUILDINGS

Offices and Salesrooms 1325-27 Girard Avenue
Factory L St. & Sedgley Avenue
Philadelphia, Pa.

Straighten Out... those CROOKED Holes *with* SPERRY - SUN Well-Surveying Instruments

Write for literature.

SPERRY-SUN WELL SURVEYING CO.
1608 Walnut St. Philadelphia, Pa.
Tulsa, Okla., 425 Petroleum Building
Houston, Texas, 3118 Blodgett Avenue
Long Beach, Calif., 549 East Bixby Road, (3800 Block—Atlantic Ave.)

The

B-M-W

Collins Belt Clamp

is based on an

Entirely

New Principle

- Bolts don't break
- No bending stress in the bolts
- Fewer belt repairs
- Important time and money saving

The COLLINS Belt Clamp is founded on a principle that is entirely new in Belt Clamp construction . . . The illustration shows clearly why its operation is ideal.

Where Obtainable?

Principal B-M-W Products are sold at supply stores, including . . . ● ADMORE Insert Pump Anchors; ● NEILSON TOOLS (Safety Sucker Rod Hooks, Tubing Hooks, Rod Elevators, Sucker Rod Sockets, etc.); ● BALLS and SEATS (made for every pumping service); ● ADMORE Liner Barrels; ● TEX TYPE Plunger Fittings and Valves; and ● COLLINS Belt Clamps.

BRADFORD MOTOR WORKS INC

OIL WELL SUPPLIES

BRADFORD, PA. — TULSA, OKLA.

Use CURTIN CENTRIFUGES for Quick, Accurate Tests

They meet all A.S.T.M. Standard Method D-96-35 and A.P.I. Code No. 25 requirements. It is ruggedly built, simple in design and needs no special care. Gear ratio and throw of the crank designed to produce the required speed with the least effort consistent with good mechanical construction.

No. 3428 Cranks and Heads for 100 c.c. and 15 c.c. machines are interchangeable.

Write for complete details.

SOLD BY

W. H. CURTIN & CO.

INCORPORATED

HOUSTON, TEXAS

Corp. have staked location for a 2,700-foot wildcat a half mile southeast of Truby and 3 miles west of the Hawley pool in Jones County. It falls on the J. W. Grogan farm, in the Longoria Survey No. 258. Butler and Horne of Dallas have staked location on the Mrs. R. Cox lands in section 3, G.H.&H. Survey, for a 2,800-foot wildcat on a block of 4,100 acres. The Iron Mountain Oil Co. holds an adjacent block of some 5,800 acres on which it is expected to drill in the near future. Other operators have been taking acreage and blocks in the northern part of the county.

Taylor Pool

Five miles northeast of Abilene, in Taylor County, S. L. Davis and others have a well which was reported pumping around 200 bbls. per day from sand logged at 1,998-2,004 feet. It is located on the Edgar Lincecum farm, in section 21, Blind Asylum Lands Survey, in the center of a 3,600-acre block. The test is now shut in awaiting repairs. A gauge will probably be made this week to determine its daily potential.

NORTH TEXAS

About 8 miles northwest of Bryson Hanlon-Buchanan Inc., which recently abandoned its first of three tests scheduled on three separate 3,000-acre blocks in central Jack County, has made location for its second test, No. 1 C. A. Worthington, in the S.A.&M.G. Survey. It will be drilled to 3,500 or 3,600 feet, the first one going to 3,620 feet, and being located on the J. C. Lindsey lands, in the I. N. Wright Survey.

PANHANDLE DISTRICT

During the past few months more interest has been taken in wildcat areas in the Panhandle district, resulting in several new tests being drilled, one of which opened a gas area in Hansford County, and others, extending old producing areas and opening more territory to production in the district. In the past week the S. L. Ball Drilling Co. staked a location on lands of S. L. Ball on a strip in Survey 29 between section 4 of the H. W. Wallace Survey, and section 4, Block B-2, G.C.&S.F. Survey, north of Alanreed in the southern part of Gray County. Several previous tests have been drilled in that area, but no commercial production has been developed.

Sherman County, south of the Oklahoma Panhandle, and second from the most northwesterly county in Texas, is to receive a wildcat test. The Indian Territory Illuminating Oil Co. will drill it on the Davis ranch, northeast quarter of section 404, Block 1-T, T.&N.O. Survey, in the southwestern part of the county. The company holds a large block in the area.

The Phillips Petroleum Co. has taken a block of 6,000 acres in the southeastern corner of Hartley County, on which is located an old gas producer drilled by the Dana Oil and Gas Co. in section 81, Block 44, H.&T.C. Survey, which was later taken over by the Sunray Oil and Gas Co. No announcement has been made as to proposed drilling on the block.

WEST TEXAS COMPLETIONS

Andrews County

Amerada Petroleum Corp. No. 1 Littman, dry and abandoned, 4,777 feet, elevation, 3,577 feet. Humble Oil & Refining Co. No. 11 R. M. Means, 4,500-40 feet, acidized, 422 bbls. on pump.

Crane County

San Bar Oil Co. No. 2 Boeseke-Hughes, 2,005-86 feet, 895 bbls. on pump.

Ector County

American Maracaibo Oil Co. No. 6-A Scharbauer, 4,-167-4,221 feet, 846 bbls., acidized. Atlantic Refining Co. No. 5-A Rumsey, 4,160-4,266 feet, acidized, 1,213 bbls.; No. 8-A Rumsey, 4,170-4,270 feet, 1,014 bbls.; No. 2-C Rumsey, 4,160-4,280 feet, 395 bbls. Barnsdall Oil Co. No. 2 Foster, 4,012-4,183 feet, 476 bbls. on pump. Broderick and Calbert No. 1-C Cowden, 3,935-4,290 feet, 1,313 bbls. Devonian Oil Co. No. 4-D Scharbauer, 4,131-96 feet, 871 bbls.; No. 1-E Scharbauer, 4,165-4,222 feet, plugged back to 4,193 feet, 382 bbls. on pump. W. R. Dunning Jr. No. 7-A Scharbauer, 4,147-4,225 feet, 2,190 bbls. Landreth Oil Corp. No. 8-G Scharbauer, 4,156-4,213 feet, 1,568 bbls. Shasta Oil Co. No. 3-A Scharbauer, 4,169-4,230 feet, 1,208 bbls. Shell Petroleum Corp. No. 2-B Cummins, 4,185-4,265 feet, acidized, 157 bbls., 16 per cent water. Stanolind Oil & Gas Co. No. 56 Cowden, 4,060-4,292 feet, 959 bbls.; No. 57 J. M. Cowden, 4,063-4,288 feet, shot, 1,147 bbls.

Fisher County

Lewis Production Co. No. 2 Morrow, 3,537-43 feet, 1,281 bbls. Tide Water and others No. 1 Waddell, 3,492-3,502 feet, 732 bbls.

Gaines County

Amerada Petroleum Corp. No. 1 Cox, 4,903-52 feet, acidized, 668 bbls. through 1-inch choke; No. 1 S. Smith, dry and abandoned, 3,187 feet, elevation, 3,539 feet. Continental Oil Co. No. 1 Jones, dry and abandoned, 5,-156 feet, elevation, 3,650 feet. Phillips Petroleum Co. No. 1 Carter, 4,895-4,980 feet, acidized, 1,007 bbls.

Howard County

Continental Oil Co. No. 10 Overton, 2,428-2,495 feet, plugged back to 2,477 feet, 1,377 bbls. on pump; No. 16-A Settles, 2,473-2,545 feet, 1,292 bbls. on pump. Iron Mountain Oil Co. No. 1 Snyder, 2,710-2,900 feet, 566 bbls. on pump. Sinclair Prairie Oil Co. No. 4 Jones, 2,695-2,910 feet, 386 bbls. on pump.

Mitchell County

Harris and Anderson No. 1 King, dry and abandoned, 3,205 feet.

Pecos County

Humble Oil & Refining Co. No. 15-A Smith, 1,598-1,679 feet, 70 bbls. in 1 hour. B. C. Mann No. 1-A University, 920-980 feet, 109 bbls. on pump. Sam Wan Oil Co. No. 5 Masterson, dry and abandoned, 418 feet. Stanolind Oil & Gas Co. No. 18-A Tippett, 450-86 feet, 39 bls. on pump.

Upton County

Cardinal Oil Co. No. 4 Sherk, 2,165-2,230 feet, acidized, 633 bbls., 2 per cent water. Cordova-Union Oil Co. No. 1-A Fee, 2,000-88 feet, acidized and shot, 127 bbls. on pump. John W. Emch, No. 1 Lyon Estate, 2,242-48 feet, acidized, 127 bbls. on pump. Bert Fields No. 13 Gibbs, 2,290-2,315 feet, acidized, 790 bbls. on pump. Texas Pacific Coal & Oil Co. No. 9 Reese, 2,580-2,603 feet, shot and acidized, 422 bls. on pump.

Ward County

Atlantic Refining Co. No. 6-B University, 2,540-2,770 feet, 970 bbls. Little and others No. 2 Carruthers, 2,100-2,317 feet, shot, 132 bbls. A. E. Lynch No. 5-A Himmel, 2,350-2,550 feet, 279 bbls. on pump. C. H. Mahres No. 1 Wilson, 5,084-89 feet, shot, 100 quarts 5,050-87 feet, 133 bbls. Stanolind Oil & Gas Co. No. 4 Weiss, 2,250-2,394 feet, 40 bbls.

Winkler County

Atlantic and others No. 2-K Hendricks, 2,825-3,050 feet, shot and acidized, 142 bbls. Cities Service Oil Co. No. 7-E Daugherty, dry and abandoned, 3,105 feet, elevation, 2,874 feet. Gulf Oil Corp. No. 14 Clapp, 2,816-3,110 feet, 243 bbls.; No. 57 Daugherty, 2,808-3,155 feet, shot, 1,012 bbls.; No. 59 Daugherty, 2,824-3,020 feet, 1,915 bbls.; No. 60 Daugherty, 2,817-3,020 feet, shot, 795 bbls.; No. 2-A Edwards, 3,123-50 feet, 232 bbls. Magnolia Petroleum Co. No. 13 Colby, 2,883-3,120 feet, 424 bbls; No. 101 Walton, 2,850-2,490 feet, 625 bbls. Sinclair Prairie Oil Co. No. 2 Sealy, 3,100-36 feet, shot, 194 bbls. Skelly Oil Co. No. 22 Halley, 2,765-2,880 feet, 305 bbls. through three-fourths inch choke; No. 2-B Leck, 2,940-3,080 feet, acidized, 2,092 bbls. Texas Pacific Coal & Oil Co. No. 22 Daugherty, 2,849-2,949 feet, shot, 169 bbls. in 20 hours; No. 2 Vaden, 2,700-3,025 feet, 444 bbls. in 23 hours, shot.

NORTH TEXAS COMPLETIONS

Archer County

Deep Oil Development Co. and Lindsay No. 24 L. F. Wilson, 2,200-09 feet, 500 bbls. Fraser & Proctor No. 2 L. C. Garvey, 1,518 feet, dry. Harrison & Lloyd No. 1 W. L. Jones, 858 feet, dry. Holbrook & Wood No. 3 J. S. Matlock, 702 feet, dry. E. B. Madden No. 4 J. T. Richardson B, 1,170 feet, dry. Shappell Oil Co. No. 1 John Conner B, 1,096-99 feet, 20 bbls.

Cooke County

Kingery Brothers No. 5 F. J. Trubenbach, 890-921 feet, 2 bbls. F. W. Merrick, Inc., No. 1 Natt Piott, 702-882 feet, 2 bbls. Ripps & Underman No. 1 W. L. Johnson A, 1,900-24 feet, 5 bbls.

Montague County

Raizen Brothers No. 14 J. W. Maddox, 630-78 feet, 10 bbls.

Wichita County

J. W. Aiken, Jr., No. 1 W. D. McClure, 1,948-56 feet, 200 bbls. Ed Blair No. 1 W. B. Honaker, 1,001 feet, dry.

G. W. Cooper No. 28 Waggoner C, 1,627-42 feet, 225 bbls. Mogren & Anderson No. 1 K. T. Goetz, 1,514-23 feet, 5 bbls. Petroleum Production Co. No. 75 First National Co., 3,665-3,855 feet, 575 bbls. Pois & Schulz No. 1 Foster I, 2,001 feet, dry.

Wilbarger County

Phillips Petroleum Co. No. 172 Waggoner Ranch, 1,904-57 feet, 100 bbls. Waggoner Refining Co. No. 5 Waggoner G, 3,134 feet, dry.

Young County

T. D. Humphrey and others No. 1 B. W. King, 3,834-3,955 feet, 528 bbls. Pitzer West & Lion No. 3 Norton, 3,800-97 feet, 785 bbls. and 500,000 feet of gas. Sams & Watson No. 7 E. B. Calvin, 595 feet, dry. Underwood Drilling Co. No. 1 W. L. Boyd, 852 feet, dry. R. H. Vise No. 4 G. W. Norton, 3,848-3,960 feet, 725 bbls. Wise & Jackson No. 17 F. M. Cullers, 542-65 feet, 8 bbls.

PANHANDLE DISTRICT

Gray County

F. W. Dye and others No. 6 Holmes, 3,130-3,256 feet, shot, 519 bbls. on pump. I. T. I. O. Oil Co. No. 10 Smith, 3,150-3,275 feet, shot, 900 bbls. on pump. Kewanee Oil & Gas Co. No. 5 McKinney, 3,183-3,293 feet, shot, 632 bbls. on pump. Shamrock Oil & Gas Co. No. 4 Saunders, 3,135 feet, plugged back to 3,100 feet, shot, 709 bbls. on pump. Southern Petroleum Exploration Co. No. 8 Vaughn, 3,170-3,235 feet, shot, 491 bbls. on pump. Tharp and Dawson No. 4 Short, 3,040-3,113 feet, shot, 647 bbls. on pump.

Hutchinson County

Gulf Oil Corp. No. 73 Dial, 2,990-3,080 feet, shot, 377 bbls. on pump. Phillips Petroleum Co. No. 1 Gary, 3,212-68 feet, plugged back to 3,255 feet, shot, 222 bbls. on pump. Shell and others No. 1 Lucas, 2,951,3-178 feet, shot, 24,000,000 feet gas. Stanolind Oil & Gas Co. No. 8-A Ware, 3,090-3,174 feet, shot, 253 bbls. on pump; No. 12-A Watkins, 2,915-84 feet, shot, 267 bbls. on pump. The Texas Co. No. 10 Pond, 3,010-90 feet, shot, 623 bbls. on pump. Turman and others No. 7-B Whittenburg, 2,770-2,835 feet, shot, 780 bbls. on pump. Walero Oil Co. No. 5 Haile, 3,020-65 feet, shot, 180 bbls. on pump.

Moore County

Phillips Petroleum Co. No. 1 Bush, 2,685-3,050 feet, plugged back to 2,920 feet, shot, 35,000,000 feet gas.

CENTRAL TEXAS COMPLETIONS

Brown County

W. T. Daniels and others No. 1 Joyner, dry and abandoned 1,624 feet.

Callahan County

George R. McManis No. 1 Mobley, dry and abandoned 650 feet.

Jack County

Edwards, Knowles & Crespi No. 1 Jones, 2,964-3,095 feet, 530 bbls. Kerlyn Petroleum Co. No. 1 Ventioner, dry and abandoned 3,508 feet. Mullendore, Berry & Berry No. 5 Clayton, 2,987-3,085 feet, 503 bbls. Ohio Fuel Supply Co. No. 2-A Kuykendall, 2,872-2,914 feet, 232 bbls. Royal Petroleum Corp. No. 3 Raley "A," 3,177-3,218 feet, 398 bbls.

Jones County

Campbell & Hoover No. 1 Swenson, dry and abandoned 2,012 feet. Danciger Oil & Refining Co., Inc., No. 8 Guitar, 1,976-2,007 feet, 3,000 gallons of acid, 579 bbls. S. C. Herring No. 2 Jackson, 1,967-2,004 feet, 2000 gallons of acid, 600 bbls. in five hours. Lewis Production Co. No. 1 Huddleston, 1,927-35 feet, 10 bbls.; No. 6 Sayles, 1,974-86½ feet, 293 bbls. R. J. Reinke No. 1 Blackwell, 1,420 feet, junked hole.

Shackelford County

Canyon Oil & Gas Co. No. 1 Herron, dry and abandoned 781 feet. Hickok & Reynolds No. 22 Mathews, 1,021-32 feet, 35 bbls.

Expo Housing Chairman

Chairmanship of the housing committee for the Tenth International Petroleum Exposition in Tulsa May 14 to 21, 1938, will again be filled by Earl Sneed, independent oil operator of Tulsa, according to an announcement by General Manager William B. Way.

Organization and selection of the committee members will begin soon to handle the reservations for the 1938 show. Information concerning reservations may be acquired by writing the housing committee, care of the Exposition at 220 East Third Street, Tulsa.

Gulf Coast Fields

(Continued from Page 95)

was preparing to run tubing and test No. 1 Jameson after the well started flowing when perforations were made in the casing at 2,045-50 feet. Before the well was killed with mud, it was showing wash water, gas and some oil.

Busy Hastings Field

Nine additional drilling wells and the same number of completions were recorded in the Hastings field in Brazoria County. The majority of the new locations were made in the vicinity of the recently opened northern extension area. Completions were reported by Humble Oil and Refining Co. on the Alexander and Cecil Brown tracts while the balance were made by Stanolind Oil and Gas Co. on the Curket, Condon, J. F. Law, Long, Matsushita, Randal and Turner tracts.

In the Lockridge field, drilling activities have extended to the river bed of the Brazos River. Location has been made and the rig moved in by McCurdy and Johnson for No. 1 State midway on line between Gulf Oil Corp. No. 1 and 2-A Wood. Dr. C. M. Lusk No. 1-B Ramsey State Prison Farms perforated casing at 6,365-68 feet and flowed 216 bbls. per day through a three-sixteenths inch choke with tubing pressure 2,100 pounds and casing pressure 2,400 pounds. Locations were made by Kirby Petroleum Co. for No. 1 Carrie Baker and by Gulf for No. 4 Carrie Baker, being an offset to Dr. Lusk No. 1 Ramsey.

In the Old Ocean field, Brazoria County, Harrison & Abercrombie were testing No. 1 Larsen, about a mile northeast of production in the Charles Breen Survey. With the hole bottomed in sand and shale showing oil at 10,761 feet, the 7-inch casing was perforated at 10,-635-50 feet. Location has been made for No. 1 Copeland and Osborn, which will be drilled as soon as the present drilling well is completed.

To the northeast at Sandy Point, Henry DeArman was running casing preparatory to testing No. 2 J. A. Fite, broken sand showing gas was topped at 6,453 feet, gas sand at 6,458-77 feet and oil sand at 6,493-6,505 feet, the total depth. It is a south offset to the discovery well in the D. Talley Survey.

New Shallow Gas Area

Stanolind Oil and Gas Co. No. 1 Moody opened a shallow gas sand for the Clinton field, northeast of Houston in Harris County. With the hole bottomed at 4,600 feet and 5¾-inch casing cemented at 3,650 feet, perforations were made at 3,596-3,600 feet and it began to show gas and wash water under a tubing pressure of 1,150 pounds. It is probable that the well will be killed and the casing reperforated in an attempt to find oil production since Schlumberger survey showed possible sands at 3,215-60, 3,425-42 and at 3,595-3,604 feet. The well is half mile northeast of the discovery well that was completed for a large gas well below 8,000 feet.

Th fifth producer in the prolific Friendswood field, southern Harris County, was completed by Humble Oil and Refining No. 1 E. A. Gray, northwest of the discovery well, flowed 28 bbls. per hour through a quarter-inch choke, with tubing pressure 875 pounds and casing pressure 900 pounds. Sand was topped at 5,800 feet and cored to a total depth of 6,013 feet. Five and one-half inch casing was cemented at 5,790 feet. Of particular importance is the location made last week by Humble Oil and Refining Co. No. 1 A. E. Keisling and others, about a mile northeast of the discovery well and over a mile north of the south extension area. The outcome of this test is expected to throw more light on the possible trend of this field.

Some excitement was caused in San Jacinto County by the shallow core test, J. G. Mayo and others No. 1 Gibbs Bros. in the L. E. Mrequez Survey. While coming out of the hole with a core cut in sand at 1,350 feet, the well attempted to blow out and considerable mud had to be used before it was killed. It is coring ahead.

There were only two wildcat locations made along the Texas side of the Gulf Coast. One mile south of the South Cotton Lake field, Chambers County, Joe Lundin and others have rigged up No. 1 Lawrence, in the Solomon Barrow Survey, while northeast of the Dickinson field, Galveston County, R. R. Gray and others have made location for No. 1 Dr. F. G. Eidman in the Anthony Hatch Survey.

Maco Stewart No. 1 fee, the discovery well of the Hitchcock Prospect, Galveston County, flowed 209 bbls. on a 24-hour potential test through a quarter-inch choke with tubing pressure 450 pounds and casing pressure 650 pounds, during the last 24-hour gauge ending September 16, it flowed only 66 bbls. through the same size choke and the tubing pressure had increased to 575 pounds and the casing presure to 850 pounds.

Heaving shale resulted in two more wildcats marked off the list. Both were located in Brazoria County. Texas Co. quit No. 2 Robbins in a sidetracked hole at 7,561 feet while Pure Oil Co. abandoned No. 1 P. M. Slade at 8,353 feet. Both were abandoned due to mechanical trouble caused by the shale.

Humble Oil and Refining Co. No. 1 Ellender, the discovery well of the Lirette field, Terrebonne Parish, Coastal Louisiana, lost its record as the world's deepest producer when it was plugged back from the 11,000-foot horizon to 10,635 feet after attempts to shut off the salt water flow failed. Originally completed through perforations at 11,610-15 feet for an initial production of 37 bbls. per hour, the well began to show salt water and after plugging back and testing at 11,615-19 feet with no success, the hole has been cemented back to 10,635 feet where it will be tested through perforations.

Kansas Fields

(Continued from Page 92)

2,335 feet, was acidized and pumped 50 bbls. of oil daily.

Diller Oil & Gas Co. No. 8 Key B, SE NW NW section 25-31-10, Key pool, was completed as a 2-bbl. pumper after acidizing Oswego lime topped at 1,641 feet, total depth 1,660 feet.

Armer and others No. 1 Julian, SW SE NE section 35-31-10, had Siliceous lime at 2,310 feet, total depth, plugged back to 2,040 feet, acidized but was abandoned. Elmwood Oil Co. No. 3 Hawks, SE SE SE section 15-30-10, was dry and abandoned at 2,010 feet, total depth.

Stevens County

United Production Co. No. 1 Winter, C NW section 13-31-35w, Hugoton district, Stevens County, was bottomed at 2,751 feet, was shot and produced 3,800,000 feet of gas.

United Production Co. No. 1-14 Christopher, C SE section 14-33-37w, was location for a new Stevens County test. Benedum & Trees No. 1 Ferguson, C NE section 5-35-38w, was drilling at 450 feet.

Grant County

Columbian Fuel Corp. No. 1 Smith, C SE section 35-28-36w, Grant County, had sand at 2,625-2,760 feet, total depth, and produced 5,000,000 feet of gas daily.

Same company's No. 1 Hickok, C SW section 9-29-36w, topped Dolomite at 2,452 feet, total depth 2,731 feet, and produced 5,500,000 feet of gas.

Scattered First Reports

H. C. Becker and others No. 1 Mason, SW SW NE section 9-17-1w, wildcat in McPherson County, was shut down at 690 feet.

In Sedgwick County, McKnab No. 1 Garrett, SE SW NW section 18-29-2e, wildcat, had spudded. Prunty Production Co. and others No. 2 Smith A, SW NW SE section 16-25-1e, was building rig. Same operator's No. 2 Black A, SW SW NE section 16-25-1e, was drilling at 500 feet.

R. E. Parrish had built rig at No. 1 Pizel, NE NE SE section 15-6s-42w, wildcat in Sherman County, second county south of the Nebraska line and adjoining the Colorado line.

Morgan & Flynn and associates had started work at No. 2 Schroeder, NW NW SE section 23-18-16w, new Rush County operation.

Magnolia Petroleum Co. No. 1 Baird, SW SE SW section 2-30-4w, wildcat in Sumner County, was a rig.

D. M. Rhodes & Co. No. 8 Browning, 275 feet north and 275 feet east of west quarter corner, section 18-22-10, Greenwood County, was a rig.

New activity in Woodson County: Saco Oil Co. No. 5 Klick, SW section 20-25-14, drilling; C. L. Sheedy No. 1 Corkery, 175 feet south and 1,154 feet west north quarter corner, section 29-25-14, drilling; Seibel No. 1 Kerschner, C N half NE NE section 3-26-15, wildcat, drilling; Steinle No. 1 Kash, SE cor. section 4-26-15, wildcat, drilling.

Canadian Fields

Well in Alberta Breaks All Canadian 75-Year Records

By VICTOR LAURISTON

CHATHAM, Ontario, Sept. 18.—Crude and naphtha deliveries from the Turner Valley field to the Calgary refineries in August established an all-time high record of 232,557 bbls., compared with the previous peak figure of 195,134 bbls. in July. Total deliveries for the eight months of 1937 reached 1,238,183 bbls. compared with 666,879 bbls. in the same period last year.

Davies Gets Big Well

In section 28-18-2w5, Davies-Royalite No. 2, LSD 13, finished 469 feet in the Madison limestone at 6,965 feet as the largest producer yet completed in Turner Valley and the largest producer in Canada since 1862. It was completed by the compressor method, the hole having been cleared of fluid from the 2,800-foot level, tubing run to 4,100 feet, and gas lift applied under 1,400 pounds pressure. The well made 133 bbls. flush production in the first hour, and the definite production test showed 2,645 bbls. in the first 24-hour run, 2,298 bbls. in the second and 2,144 bbls. in the third. The gas flow, estimated more than 7,000,000 feet a day, will be handled by the Royalite absorption plant. Settled crude production, after tubing is adjusted, will run around 2,000 bbls. a day. The crude is 44.7 gravity, worth $1.44 a barrel.

The test was drilled jointly by Davies Petroleum, Ltd. on acreage secured from Ace Oils, Ltd. and Royalite Oil Co., which handled the actual drilling.

Brown Gets Production

In the southwest extension of the field, Brown Oil Corp. No. 1, LSD 14, section 16-18-2w5, finished 370 feet in the Madison limestone at 6,814 feet. It has run tubing and is testing production. Good porosity was indicated in the lime and a large producer is expected. It will extend the proven field nearly a half mile south of Westside Royalties No. 1, previously the most southern producer.

Tests in the Lime

In the West Central area, Mercury Oils No. 8, LSD 3, section 4-19-2w5, is below 5,832 feet, more than 232 feet in the lime, and will be carried to around 6,000 feet. A pocket of gas and strong shows of crude were encountered in the upper lime.

In section 20-18-2w5, Brown Oil Corp. No. 2, LSD 8, got the lime at 6,527 feet and is below 6,642 feet after cementing casing.

In section 29-18-2w5, Granville Oils No. 1, LSD 16, got the lime at 6,857 feet and is preparing to resume after cementing casing around 6,887 feet. Share Royalties No. 1, N half LSD 8, same section, got the lime at 6,729 feet and is resuming after cementing casing at 6,853 feet.

In section 28-18-2w5, Model-Spooner-Reward No. 1, LSD 4, got the Madison limestone at 6,461 feet and has cemented casing. This test offsets the Davies-Royalite No. 2 producer immediately to the north.

West Side Drilling

In section 33-18-2w5, Royalite Oil Co. No. 6 Sterling Pacific, LSD 5, is below 5,435 feet. Same company's No. 5 Sterling Pacific, immediately to the north, is maintaining a production of 1,770 bbls. a day.

In section 32-18-2w5, Royal Crest Petroleums No. 1, LSD 9, is below 6,227 feet and should get the lime in about a week.

In section 28-18-2w5, Four Star Petroleum No. 1, LSD 13, is below 6,397 feet. Three Point Petroleums No. 1, LSD 12, is below 6,080 feet. Richland Royalties No. 2, LSD 5, is below 5,312 feet. Richland No. 3, LSD 14, is maintaining a steady flow of 530 bbls. a day.

In section 29-18-2w5, Commoil No. 1, LSD 15, is below 6,771 feet after getting the Lower Dalhousie formation at 6,749 feet. It is expected to get the lime close to 7,000 feet. This well is the farthest west from the crude oil line and will determine the possibilities lower on the structure. National Petroleum Corp. No. 1, S half LSD 8, is below 6,476 feet and getting close to the Madison.

Southwest Extension

In the southwest extension of the field, Prairie Royalties No. 1, LSD 16, section 17-18-2w5, got strong shows of light crude in the brown sands of the Dalhousie formation around 6,550 feet and is deepening below 6,661 feet with the limestone expected around 6,700 feet.

In section 16-18-2w5, Firestone Petroleums No. 1, LSD 13, is below 5,866 feet, after getting the Home sand at 5,800

CALIFORNIA OIL FIELD OPERATIONS FOR JULY, 1937

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for July amounted to 20,575,815 bbls., an average of 663,736 bbls. per day. This is a decrease of 60 bbls. per day under June production.

Total stocks of crude and all products in Pacific Coast territory decreased during the month 1,481,572 bbls. The total stocks at the end of the month were 123,238,339 bbls. The total stock decrease for 1937, up to July 31, was 8,105,397 bbls.

One hundred thirty-five wells were completed during the month with an initial daily production of 79,958 bbls., compared with 100 wells completed during June with an initial production of 47,057 bbls.

CALIFORNIA OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abandoned: Drillers	Abandoned: Producers
Group 1:							
Belridge—North	1	6	2	3,899	44	...	1
Belridge—South	...	...	1	130	160	...	...
Coalinga	...	1	...	...	904	...	1
Edison	...	...	...	...	90	2	...
Elk Hills	...	1	1	240	157	...	2
Fruitvale	4	8	3	587	152	1	...
Greeley	3	1	3	4,083	5	...	...
Kern River	11	11	9	1,147	1,345	...	...
Kettleman Middle dome	...	1	...	...	3	...	...
Kettleman North dome	4	10	3	4,446	156	...	...
Lost Hills	4	4	2	136	238	1	...
McKittrick	...	1	1	40	185	1	...
Midway-Sunset	5	8	8	1,878	2,441	7	7
Mountain View	5	10	2	345	185	1	5
Mount Poso	9	5	7	2,396	255	...	...
Round Mountain	9	10	1	368	132	2	...
Ten Section	...	2	1	1,830	5	1	...
Wheeler Ridge	...	...	...	...	26	...	...
Group 2:							
Captain	1	1	...	...	32	...	...
Elwood	...	...	...	...	81	...	...
Rincon	1	2	1	1,315	34	...	...
San Miguelito	1	1	1	1,265	13	...	...
Santa Barbara	...	...	...	...	44	...	1
Santa Maria	10	16	7	1,974	240	...	...
Summerland	...	1	...	...	19	...	...
Ventura Avenue	3	9	1	2,976	210	...	...
Ventura-Newhall	6	19	3	209	569	1	...
Watsonville	...	...	...	...	7	...	...
Group 3:							
Brea-Olinda	...	1	...	...	370	...	...
Coyote—East	...	3	2	355	80	...	...
Coyote—West	...	...	...	...	37	...	...
Dominguez	1	6	2	413	142	...	...
El Segundo	9	10	4	6,139	24	...	...
Huntington Beach	1	2	2	698	571	...	...
Inglewood	1	...	1	2,776	196	...	...
Lawndale	...	1	...	...	6	...	...
Long Beach	...	5	4	981	1,239	...	...
Los Angeles-Salt Lake	...	...	...	...	113	...	7
Montebello	...	3	...	...	210	2	1
Newport	...	...	...	...	...	1	...
Playa Del Rey	2	2	1	185	208	...	2
Potrero	...	...	...	...	11	...	...
Richfield	2	4	3	250	285	...	...
Rosecrans	2	5	1	1,205	77	...	...
Santa Fe Springs	...	2	1	119	658	...	1
Seal Beach	1	...	1	132	113	...	2
Torrance	...	7	...	...	536	...	...
Whittier	...	...	...	...	155	...	...
Wilmington	41	45	55	37,441	207	...	...
Miscellaneous drilling	5	55	...	...	...	18	...
Group 4—gas fields:							
Buena Vista Lake	...	...	...	...	5	...	...
Buttonwillow	...	...	...	...	...	...	...
Chowchilla	...	...	...	...	...	...	...
Delano	...	...	...	...	...	...	...
Dudley Ridge	...	...	...	...	...	...	...
Goleta	...	...	...	...	1	...	...
McDonald Island	...	...	...	...	4	...	...
Rio Vista	2	1	1	Gas	1	...	...
Semi-Tropic	...	...	...	...	...	...	...
Tracy	...	...	...	...	...	...	...
Total July	144	280	135	79,958	12,982	38	30
Total June	119	301	100	47,057	12,908	16	7
Increase (*Decrease)	25	*21	35	32,901	74	22	23

CRUDE PETROLEUM PRODUCTION

(Figures of Production and Stocks are in barrels of 42 gallons)

	Total production July	Daily average July, 1937	Daily average June, 1937	Daily average July, 1936
Group No. 1:				
Belridge—North	466,733	15,056	15,452	9,901
Belridge—South	50,350	1,624	1,729	1,882
Coalinga	499,720	16,120	15,792	13,515
Edison	134,909	4,352	4,328	5,687
Elk Hills	329,718	10,636	10,804	8,406
Fruitvale	282,366	9,109	9,754	7,926
Greeley	35,292	1,138	1,077	...
Kern River	498,873	16,093	15,321	13,722
Kettleman Middle Dome	3,558	115	128	375
Kettleman North Dome	2,466,567	79,567	80,742	77,688
Lost Hills	110,556	3,566	3,810	3,309
McKittrick	128,732	4,153	4,212	1,878
Midway-Sunset	2,292,547	73,953	75,195	57,093
Mountain View	570,769	18,412	18,886	26,217
Mount Poso	524,929	16,933	16,910	16,725
Round Mountain	395,169	12,747	12,196	12,016
Ten Section	85,269	2,751	2,736	803
Wheeler Ridge	10,087	325	330	339
Group No. 2:				
Capitan	82,630	2,666	2,436	1,473
Elwood	268,330	8,656	9,215	12,304
Rincon	87,033	2,808	2,612	2,984
San Miguelito	111,887	3,609	3,127	1,381
Santa Barbara	20,185	651	653	1,265
Santa Maria	410,517	13,243	11,638	4,680
Summerland	1,051	34	33	34
Ventura Avenue	1,076,700	34,732	34,697	33,903
Ventura-Newhall	154,117	4,972	5,230	4,791
Watsonville	1,860	60	60	60
Group No. 3:				
Brea-Olinda	209,257	6,750	8,611	8,001
Coyote—East	126,082	4,067	3,804	2,315
Coyote—West	225,114	7,262	8,111	8,189
Dominguez	872,059	28,131	25,352	25,588
El Segundo	272,304	8,784	5,968	379
Huntington Beach	1,115,750	35,992	37,596	35,620
Inglewood	486,493	15,693	15,909	11,690
Lawndale	2,553	82	82	97
Long Beach	1,848,137	59,617	61,090	66,972
Los Angeles-Salt Lake	20,037	646	742	883
Montebello	271,724	8,765	8,935	10,235
Playa Del Rey	258,562	8,341	8,702	12,148
Potrero	6,417	207	294	320
Richfield	277,127	8,940	9,017	6,226
Rosecrans	105,252	3,395	3,056	1,996
Santa Fe Springs	1,349,873	43,544	44,767	44,317
Seal Beach	287,995	9,290	9,359	9,492
Torrance	235,332	7,591	8,048	7,744
Whittier	27,754	895	918	931
Wilmington	1,477,539	47,663	44,332	...
Total July	20,575,815	663,736	663,796	574,500
Total June	19,913,888	663,796		
Decrease	*661,927	60		

*Increase.

feet. It is logging higher than Prairie No. 1.

65 Per Cent Prorating Proposed

At a conference between Hon. N. E. Tanner, minister of lands and mines for Alberta, and Turner Valley operators, a proposal was discussed to prorate crude production on a basis of 65 per cent of capacity. This was suggested as temporary measure till the marketing problem in the field could be solved by the extension of marketing areas in the western provinces.

At the time of the conference, it was estimated that some 200,000 bbls. of Turner Valley crude was in storage in the field and at Calgary. Production of the Turner Valley field has reached more than 12,000 bbls. a day, with prospects that completions this month will increase it to around 15,000 bbls.

To handle this production there are two 4-inch pipe lines from the field to Calgary, representing a capacity of 12,000 bbls. a day in summer and 10,000 bbls. in winter. The Imperial plant at Calgary has a capacity of 5,000 to 6,000 bbls. a day and the Bell refinery, operated by British-American Oil Co., can handle 500 to 600 bbls. With the area of Alberta and western Saskatchewan the British-American Oil Co. has a refinery at Coutts, Alberta, with capacity of 2,500 bbls., handling chiefly Montana crude under long-term contracts, and a plant at Moose Jaw, Saskatchewan, with capacity of 3,000 bbls. The Imperial refinery at Regina could handle 4,000 to 5,000 bbls. a day. It is doubtful, however, if the territory served by these plants could absorb their capacity output.

Recent reductions in crude prices accompanied by freight rate reductions are expected to ultimately widen the market for Turner Valley crude; but outside this area the nearest refineries are at Winnipeg, Manitoba, and Vancouver, British Columbia. To facilitate marketing to the east, a pipe line to Moose Jaw and Regina, at an estimated cost in excess of $5,000,000 has been suggested, possibly as a government-owned project. While Canada spends approximately $50,000,000 a year for imported petroleum and petroleum products, the major market for these is in Ontario and Quebec, which are beyond reach of any possible facilities and involves a long railway haul, though they could be reached more cheaply by water haul from the head of the lakes.

The western provinces in recent years have drawn their crude supplies largely from Montana. Imports of Montana crude for Alberta, Saskatchewan and Manitoba in July amounted to 312,786 bbls., or slightly over 10,000 bbls. a day.

While the 65 per cent prorating proposal was approved by a number of operators, it was not accepted unanimously.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, has resumed from 8,189 feet, following inspection of the well by Campbell M. Hunter, O.B.E. of London, England, president of the company.

On the Kootenay dome, west of Calgary, Roxana Petroleums No. 1, section 8-24-7w5, is more than 157 feet in the Devonian limestone below 3,262 feet with an increase in the gas flow.

On the Highwood-Sinclair structure south of Turner Valley, Green Valley Oils No. 1 Banner, LSD 6, section 34-17-3w5, has resumed in the Lower Blairmore formation from 3,158 feet after cementing caving, following a small strike of sweet gas.

On the Watson structure, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, is rigging rotary outfit to resume from 5 520 feet.

In the Pincher Creek area, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, bottoming at 6,432 feet, is waiting for acid treatment.

Taber Field

In the Taber field, southern Alberta, Plains Petroleum Corp. No. 1, LSD 14, section 29-9-17w4, is at 3,310 feet, after drilling through 10 feet of heavy saturated sand believed to be of the Ellis series. Test has been held up owing to four faulty cement jobs; but a formation tubing squeeze job is being completed after which a definite production test will be made. This is the second producing horizon encountered in Plains No. 1, considerable oil having been met in the Clancey sand at around 3,204 feet.

Moose Dome Operations

On the Moose dome, west of Calgary,

(Continued on Page 113)

25,000 MORE FEET
That Won't Wear Out . . .

DICKEY ACID PROOF PIPE

Used in New SALT WATER DISPOSAL PROJECT

4" to 24" in Diameter

The ever-increasing mileage of Dickey Vitrified Salt-Glazed Clay Pipe is again boosted by a new salt water disposal project in the Crescent Field of Oklahoma. Dickey Clay Pipe was selected because it is absolutely impervious to the action of salt, acid or chemicals of any kind when jointed with an asphalt compound.

BIG SAVING

This type of construction will not corrode or disintegrate, lasts indefinitely and costs much less than other types.

Dickey Pipe is always available in 4 to 24-inch sizes. Shipments made promptly from plants at Pittsburg, Kansas; Deepwater, Missouri; and Texarkana, Tex-Ark.

ASK ABOUT LOW PRICES!

W. S. DICKEY CLAY MFG. CO.
KANSAS CITY, MO.

William M. Barret, Inc.
Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING -:- SHREVEPORT, LA.

Use this automatic J-M Packing for greater efficiency . . . for lasting protection against costly shutdowns

NO ORDINARY PACKINGS—these Johns-Manville Sea Rings! They not only last longer—but also, they reduce wear on rods—minimize your power requirements.

For Sea Rings are *absolutely automatic!* The flexible lip is held tightly to the rod on the work stroke by the pressure of the liquid, but releases on the return. Result—unnecessary friction is eliminated. And that means less wear on equipment . . . greater savings in power costs.

Then, too, the extra service provided by this long-lasting packing obviates frequent replacements and consequent shutdowns. In every respect, therefore, they are the best packing for reciprocating rods and plungers used in service against oil, steam, hot and cold water, air or brine.

* * *

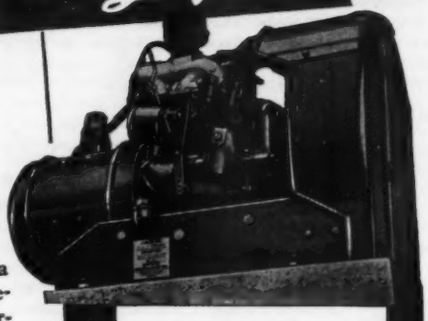
For full details on Sea Rings, and on the complete J-M line as well, write for our Packings Catalog. Address Johns-Manville, 22 East 40th Street, New York City.

JM Johns-Manville PACKINGS & GASKETS

Electric Power and Light

WHERE YOU WANT IT...
WHEN YOU WANT IT!
WITH

DELCO-LIGHT



● On any job in the oil fields, at any time, a Delco-Light plant meets your full requirements for either portable, stationary or permanent electric service. Cuts power expense. New designs give lowest operating cost in history!... Delco-Light plants are available in a wide range of sizes to suit your needs. AC and DC. Ask your local Delco-Light dealer for full details on these dependable power units. No obligation.

UNITED MOTORS SERVICE INC.
General Motors Building, Detroit, Michigan

Model 15AD1
—1500 watts—110 volts DC
. . . starts and stops automatically whenever load is applied. 2 cylinder 3 H. P. water-cooled engine.

Other Models Available
—150 to 6000 watts
Easy Payment Terms

PRODUCT OF GENERAL MOTORS

This is *ECOLITE* 50S

Available at Supply Stores

A SAFE ELECTRIC LANTERN WITH A POWERFUL LONG SPOT

No other lantern answers the need of Pipe Line Men, Gaugers and Pumpers as does Ecolite 50S. It's easy to carry and use. Throws a very bright beam—is perfectly safe in presence of inflammable gases and vapors and comes recommended by Underwriters' Laboratories.

ECONOMY ELECTRIC LANTERN CO.
325 W. Huron St., Chicago, Ill.

World's Largest Marketers of

PETROLEUM COKE

INQUIRIES AND OFFERS INVITED

GREAT LAKES COAL & COKE CO.
30 Rockefeller Plaza, New York, N. Y.

GENERAL OFFICES
Standard Oil Co. (Ind.) Bldg., Chicago, Illinois

Eighteenth Annual Edition

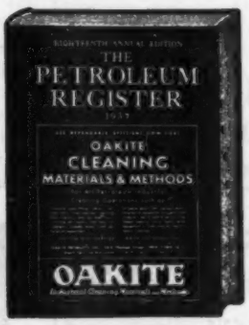
The PETROLEUM REGISTER

just off the press with 924 pages of information on 23,000 oil companies

Includes 20,000 Names of Individuals You Want to Contact—Field Superintendents . Officers . Purchasing Agents . Refinery Superintendents . Chief Engineers . Sales Managers and other important men.

A Few of the 25 Sections

Refiners
Producers
Marketers and Jobbers
Compounders and Grease Manufacturers
Pipe Lines
Refiners with Names of Superintendents
Trade and Brand Names
Petroleum Personnel
Statistical Section
Exporters
Drilling Contractors
Royalty Companies
Natural Gasoline Plants
Foreign Companies
Marine Transportation and Lighterage.



Place your order with the Book Department

Price $10.00

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Oklahoma Fields

(Continued from Page 80)

D. W. Howard No. 2-A Barnett, SE SW NE section 18-14-15, was dry and abandoned at 1,302 feet, total depth.

New work in Okmulgee County: R. F. Harmon No. 7 Newhouse, SE NE NW section 20-12-12, was drilling at 300 feet; J. E. Dow No. 9 Spurgeon, C N half NW section 13-14-14, drilling at 660 feet; W. D. Coyle No. 10 Gardner, NW SE SW section 33-14-14, an old abandoned well, cleaning out on bottom, 1,663 feet, total depth; W. B. Pine and B. H. Young No. 1 Miller, C E half NW SW section 5-15-14, location.

Lincoln County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. and others No. 2 Eakers, SE NE SW section 35-15-2e, North Wellston pool, Lincoln County, topped Wilcox sand at 5,095 feet, was bottomed at 5,118 feet, flowed 263 bbls. of oil in six hours and made potential of 794 bbls.

Sun Oil Co. No. 4 Cook, SW NW SW section 1-14-3e, Chandler area, had Skinner sand at 4,258 feet, total depth 4,514 feet, and flowed 20 bbls. of oil daily.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 2 Sporn, SE NE SE section 20-17-3e, Sporn area, found Wilcox sand at 4,586 feet, total depth 4,590 feet, and pumped 130 bbls. of oil and 215 bbls. of water daily.

Muskogee County

Conrad Lambert No. 1 Charles, NE SW NW section 6-15-15, Muskogee County, had sand at 1,260 feet, total depth 1,320 feet, and pumped 15 bbls. of oil in 24 hours.

R. E. Downing No. 1-A Fisher, CSL SE SW section 31-16-15, was dry and abandoned at 1,302 feet, total depth.

Conrad Lambert No. 4 Summers, SW NE NW section 6-15-15, was a machine. Browning & Potter No. 1-A McLemore, C NE NW section 33-15-16, was a location.

Garvin County

Skelly Oil Co. No. 2 Hinkle, NW NW SW section 32-1n-3w, Tussy pool, Garvin County, pumped 262 bbls. of oil in 24 hours and was completed at 3,393 feet, total depth. First oil pay was topped at 3,115 feet.

Otto Schulz No. 1 Helm, SE SW SW section 32-1n-3w was a location. Julian Leidermann No. 1 Snow, NE SW SW section 32-1n-3w, was a location. Cox & Hamon No. 2 Tussy, SE NE SE section 31-1n-3w, set 13-inch casing at 53 feet.

Carter County

Snowden & McSweeney No. 30 Apple & Franklin, NW SW NE section 9-4s-3w, Healdton field, Carter County, had first oil sand at 903 feet, was bottomed at 1,080 feet, was shot and pumped 12 bbls. of oil daily.

Carter Oil Co. No. 43 Ward, NW NE NW section 6-4s-3w, had oil sand at 901 feet, total depth 1,200 feet, plugged back to 1,195 feet and pumped 10 bbls. of oil daily.

H. F. Potts No. 1 Franklin, SE cor. section 9-1s-2w, was dry and abandoned at 770 feet, total depth.

Sinclair Prairie Oil Co. No. 3 Holman, SE NE NW section 16-4s-3w, an old well, was abandoned at 1,297 feet, total depth, after failing to recover casing lost in the hole.

Carlos Wagner No. 1 Brady, SE NW NW section 4-2s-2w, an old well being deepened from 600 feet, was drilling at 1,200 feet. Kewanee Oil & Gas Co. No. 5 Johnson, NE NE NW section 5-4s-3w, was rigging up machine. W. W. Woodworth No. 3 Woodworth, NW NE NW section 20-4s-2w, was building derrick.

Jefferson County

Farlyn Oil Co. No. 53 Seay, SE SE SW section 3-7s-5w, Jefferson County, had oil sand at 1,089-1,100 feet, total depth, pumped 45 bbls. of 36-gravity oil daily and was completed.

Long, Yingling & Lauck No. 25 Seay, SE SW NE section 3-7s-5w, was drilling at 928 feet. Tri Oil Co. No. 1 Smart, NE NE NW section 13-7s-6w, was drilling at 1,180 feet.

Other First Reports

Magnolia Petroleum Co. No. 7 Medrano, NW NW SW section 35-6-10w, Caddo County, was a location.

T. H. McCasland No. 1 Horton, NW cor. section 8-3n-5w, Grady County, was drilling at 1,590 feet.

E. J. Shaffer and others No. 1 McKee, NE NE NW section 20-28-1w, wildcat in Kay County, had spudded and shut down.

North Louisiana, Arkansas

LISBON FIELD IS EXTENDED; OIL IN SCHULER DEEP TEST

By MITCHELL TUCKER

SHREVEPORT, La., Sept. 20.—A mile-and-one-half southwest extension to the Lisbon field of Claiborne Parish, Louisiana, and testing of deep sands in the Schuler field of Union County, Arkansas, featured developments in the Ark-La-Tex area last week.

RODESSA—ARKANSAS

The Miller County, Arkansas, portion of the Rodessa field is now the most active area in that tri-state pool, there being 26 wells either rigging up or drilling. Eight new permits were issued in the past week by the Arkansas Board of Conservation for locations in Rodessa, Arkansas. Total producers now number 10, having an average daily production last week of 3,952 bbls., or 395 bbls. per well per day.

As the week closed F. W. Burford was completing the eleventh oil well in the field, No. 3 Easton, NE SE section 11-20-28, flowing at the rate of 40 bbls. hourly through five-eighths inch tubing choke, total depth 6,075 feet.

RODESSA—LOUISIANA

R. W. Norton No. 14 Starke, SW section 16-23-16, flowed 320 bbls. per day on initial test through quarter-inch tubing choke, total depth 5,910 feet, as the only completion on the Louisiana side of the field. Sixteen wells are either rigging up or drilling there.

RODESSA—TEXAS

Cass County

Bay Oil Corp. No. 2 Cobb, G. Crowder Survey, in the north extension area of Rodessa, Texas, flowed 78 bbls. in 14 hours through 10/64-inch tubing choke, total depth 6,097 feet.

Bay Oil Co. No. 2 George Parker, same survey, flowed 65 bbls. per day, total depth 6,043 feet.

United Production Co. No. 2-A Starke, D. Gilliam Survey, flowed 152 bbls. daily, total depth 6,040 feet.

Marion County

As an additional completion in the Lodi area of Rodessa, Marion County, Texas, Mid-Continent Oil Co. No. 2 Sory, A.D.S. Coy Survey, flowed 10 bbls. hourly through quarter-inch tubing choke, total depth 6,108 feet.

LOUISIANA

Bienville Parish

H. L. Hunt and Seaboard Oil Co. No. 1 Commercial Real Estate Corp., NE NW section 3-16-6, second test of the Bearcreek gas-distillate field, logged 40 feet of saturation from 6,736-76 feet, and casing is being set preparatory to testing, total depth 6,801 feet.

Claiborne Parish—Lisbon Field

After having been abandoned several months ago at 5,800 feet, operators recently reentered Lisbon Oil Co. No. 1 Burgus, section 3-20-5, a 1½-mile southwest outpost from Lisbon production, and plugged back to the new total depth of 5,234 feet. After acidizing and swabbing, the well came into production, flowing 247 bbls. the first 12 hours, and continuing to flow at the rate of about 35 bbls. hourly. Formerly this part of the formation had not been acidized, but when the application of acid to the Pettit lime proved so effective in the Lisbon field proper, this hole was reopened and completed as one of the best producers in the field. It opens up a large area on that side of the field to exploration which heretofore had been condemned.

Eleven completions were recorded in the Lisbon field last week, bringing total producers to 111.

Atlantic Refining Co. No. 1-A Tatum, N half NE SE section 31-21-4, flowed 28 bbls. hourly through five-eighths inch tubing choke, total depth 5,212 feet.

Atlantic Refining Co. No. 1-B Tatum, W half NW SW section 32-21-4, flowed 290 bbls. daily after acidizing, total depth 5,210 feet.

R. L. Bauman No. 2 M. S. Patton, N half NW NE section 1-20-5w, flowed 42 bbls. hourly through half-inch tubing choke, total depth 5,304 feet.

Hollifield and McFarland No. 4 M. Patton, E half SW SE section 31-21-4, flowed 17 bbls. hourly through 14/64-inch tubing choke, total depth 5,311 feet.

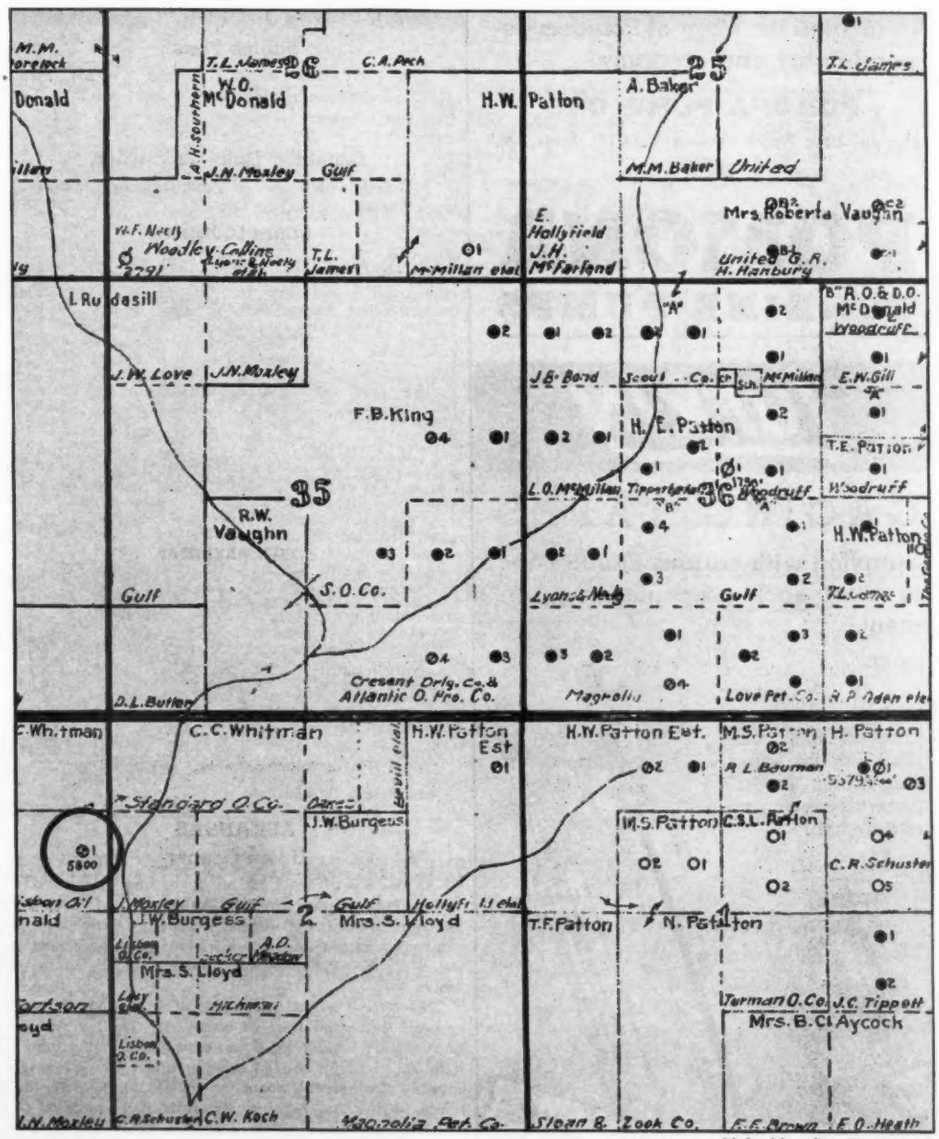
Magnolia Petroleum Co. No. 6 English, S half NE NW section 31-21-4, flowed 54 bbls. hourly through a half-inch tubing choke, with total depth 5,220 feet.

Scouts Oil Co. No. 1 E. C. English, S half SW SE section 30-21-4, flowed 21 bbls. hourly, total depth 5,215 feet.

Sells Petroleum Co. No. 2 J. Beans, Jr., E half SW NW section 32-21-4, flowed 65 bbls. hourly, total depth 5,174 feet.

Sells Petroleum Co. No. 2 W. Jones, E half SE SE section 31-21-4, flowed 17 bbls. hourly, total depth 5,320 feet.

In the Lincoln Parish portion of Lisbon, Crown Central Petroleum Co. No. 2 T. F. Patton, S half SE



Globe Map Co., Shreveport

A mile and one-half southwestern extension was made to the Lisbon field last week, after Lisbon Oil Co. No. 1 Burgus, section 3-20-5, flowed 247 bbls. in 12 hours on initial test after acidizing. This well had been formerly abandoned at 5,800 feet after drilling the Pettit lime but not acidizing it. When the application of acid to the Pettit proved so effective in Lisbon field proper, this hole was reopened, acidized, and completed as a good producer

Drill a well that flows eight thousand gallons a minute and Pomona can set a pump to deliver the water. Thousands of Pomona Pumps of this and smaller sizes are delivering water in forty-eight states and thirty-four foreign countries. Steady repeat orders tell the story of Pomona dependability and economy.

POMONA PUMP CO.

Manufacturing Plants: Pomona, Calif. - St. Louis, Mo.
Sales Offices:
New York - Chicago - Los Angeles - San Francisco

POMONA
TURBINE PUMPS

LUFKIN

GAGING TAPES

Supplied with various Plumb Bobs to meet each particular requirement.

Send for Catalog No. 12 illustrating and describing the finest and most complete line of Tapes and Rules for all general measuring requirements.

THE LUFKIN RULE CO.
SAGINAW, MICHIGAN
106-110 Lafayette St. New York City

NW section 6-20-4, flowed 28 bbls. hourly through 20/64-inch tubing choke, total depth 5,297 feet.

W. F. Lacey and others No. 2 Laura Caruthers, E half NW NE section 6-20-4, flowed 78 bbls. hourly on completion test, total depth 5,351 feet.

Olsen Drilling Co. No. 1 Aycock, N half SW SW section 6-20-4, flowed 185 bbls. daily through 14/64-inch tubing choke, total depth 5,370 feet.

Caddo Parish

W. J. Hunter and others No. 1 Stoer, section 10-15-15, wildcat test near Keithville, continues to test gas showings obtained in the Glen Rose, total depth 5,120 feet. Last official gauge showed 500,000 feet of gas and a heavy spray of salt water.

C. L. Ferguson and others No. 1 Cooney, SE section 35-21-16, pumped 5 bbls. daily, total depth 2,265 feet in the Caddo field.

Magnolia Petroleum Co. No. 25 Robertshaw, section 23-21-15, pumped 114 bbls. daily from the Nacatoch sand, in the Caddo field, total depth 1,165 feet.

In Pine Island, Stanolind Oil & Gas Co. No. 126 Dillon, NW NE section 14-21-15, pumped 5 bbls. daily, total depth 1,695 feet in the chalk.

The deep Caspiana wildcat, Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, continues to core below 8,960 feet in broken sand and shale, with no further shows reported.

Red River Parish

Yandell Rogers No. 4 Caspari, SW SE SW section 27-13-11, had been junked and abandoned, total depth 2,462 feet.

Sabine Parish

Ellis Production Co. No. 1 Wright, NW SW section 4-5-12, yielded salt water only to a total depth of 3,004 feet, and has been abandoned.

Estimated Daily Production

Estimated daily gross production all companies week ending September 17:

NORTH LOUISIANA

Bellevue	750
Caddo light	3,855
Caddo heavy	2,700
Converse	800
Cotton Valley heavy	300
Cotton Valley light	*3,410
DeSoto and Red River	1,495
Elm Grove	390
Haynesville	3,025
Holly	120
Homer	2,485
Lisbon	12,880
Pleasant Hill	115
Rodessa	51,130
Sarpeta-Carterville	315
Sligo	380
Sugar Creek	395
Urania	2,750
Zwolle	775
Total	88,070

SOUTH ARKANSAS

Champagnolle	1,355
El Dorado	1,955
Lisbon	280
Miller County	470
Nevada	740
Rodessa	3,950
Schuler	5,710
Smackover light	2,140
Smackover heavy	16,880
Stephens	585
Troy	560
Urbana	1,220
Total	35,845

Texas side of Rodessa field 33,405 bbls. daily.

*2,960 bbls. is distillate.

ARKANSAS

Union County

As the week closed, E. M. Jones and others No. 1 Marine Oil Co., NW SW SE section 17-18-17, deep exploratory well on the eastern side of the Schuler field, was being tested and showed some promise of being the deepest commercial oil producer in the state of Arkansas.

The 7-inch casing was perforated at 7,552-69 feet, opposite saturated beds of either the Travis Peak or Lower Marine, and after being washed and jammed with air, the well started flowing under its own pressure at the rate of about 35 bbls. hourly. After 24 hours testing and flowing, the fluid had increased to 103 bbls. per hour, 55 per cent salt water and 45 per cent oil, casing pressure 475 pounds, tubing pressure 250 pounds, gravity of oil 29.4 degrees.

Operators will either attempt some reconditioning of the hole to shut off bottom water in the 52 feet of sand cored above this depth, or will continue drilling on to their original objective in the Permian "big lime."

EAST TEXAS (Border Counties)

Harrison County

J. B. Bond and others No. 1 Bailey-Martin, in the Martin Survey south of Marshall, Tex., deep Trinity test of the area, drilled through the base of the massive anhydrite at 5,618 feet, and is being closely watched as it cores and drills through the beds of Lower Glen Rose, present total depth 5,795 feet.

Panola County

Magnolia Petroleum Co. No. 2 E. A. Hull, Thomas Applewhite Survey, proposed Lower Marine Trinity test, is drilling at 8,400 feet.

Danciger Oil & Refining Co. No. 1 Tatum, in the Bissell Survey, near their gas-distillate producer completed several months ago, is drilling below 5,900 feet.

MISSISSIPPI

Bolivar County

Phillips Petroleum Co. No. 1 Pertshire, section 2-24n-7w, wildcat test upon their geophysically mapped block, has been shut down at 5,700 feet in hard shale. It is reported that the hole will be abandoned and rig moved to another block in Perry County, Mississippi.

Hinds County

In the Jackson gas field, State of Mississippi No. 7 fee, section 26-6n-1e, has been completed in the chalk topped at 2,516 feet, gauging about 15,000,000 feet daily.

After making extensive geophysical surveys in Hinds County, between Jackson and Vicksburg, Southern Natural Gas Co. is expected to announce location soon for a deep test. The Southern holds more than 140,000 acres in this section of the state.

Lamar County

Sun Oil Co. and others have made location and are now rigging up for their fifth test of the recently discovered Salt dome in southern Lamar County, to be known as their No. 4 Talley, NW section 33-4n-15w.

Wilkinson County

H. L. Carnahan and others No. 1 Foster Creek, section 1-2n-2w, Wilkinson County, Mississippi, was recently abandoned at a total depth of 5,016 feet, instead of the depth previously reported at 4,129 feet.

FLORIDA

The Internal Improvement Board, which in reality is the state land department of Florida, has executed a lease contract covering 368,640 acres in Monroe County, extreme southern Florida, in favor of William G. Blanchard of Coral Gables. This 24-square-mile block is just south of the 1,000,000-acre block upon which Gulf Refining Co. is now conducting geophysical surveys.

Eastern Fields

(Continued from Page 74)

at 4,875 feet and the gas increased to over 20,000,000 feet a day.

In this district, the United Fuel Gas Co. completed No. 4,731 C. W. Shafer, in the Oriskany sand, which was topped at 5,125 feet. It gauges 3,023,000 feet a day and the total depth is 5,158 feet.

In the Campbells Creek field in Malden district, the United Fuel Gas Co. completed No. 4,742 George Creek Land & Mining Co. lease, in the Oriskany sand, total depth 4,862 feet, and it is good for 785,000 feet a day.

Several new locations were made in the Coopers Creek field. In Poca district, the South Penn Oil Co. is rigging up on the T. H. Newhouse farm on the west side of the farm across the river from Sissonville. This company is down 725 feet on the S. S. Beane test.

In Poca district, Godfrey L. Cabot, Inc., made a location on the John Wines farm 1 mile north of the D. F. Legg farm, and also on the Poca Coal Land Co., three-quarters of a mile northeast of the gas well on the John T. Bonham farm.

In the same district, the Glenn Oil & Gas Co. made a location on the A. C. Humphrey and M. D. Good town lot in Sissonville. The Mullins Gas Co. has a location on the Mart Sigman estate, one-half mile west of the J. E. and E. E. Humphries gas well.

At present in the Campbells Creek field three wells are drilling. In the Coopers Creek field in Elk district, 21 wells are drilling with two rigs standing. In Poca district, 30 wells are drilling and six rigs are up. In Union district, seven wells are drilling with one rig up. In Loudin district one well is drilling.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil, No. 2-2 Capitan, Santa Barbara Co.	32- 5-30	2,993	O.S. drlg.
Hancock-Bush, No. 2-H Santa Maria, Santa Barbara	30-10-33	3,465	sd. sh. drlg.
Macrate, A. N., No. 2-F Santa Maria, Santa Barbara	26-10-34	4,620	flow. 2,050 b.d.
Pet. Prop., Inc., No. 1-R Santa Maria, Santa Barbara	19-10-33	723	reaming
Sed Oil, No. 1 Mills, Santa Maria, Santa Barbara Co.	27-10-34	4,176	sd. sh. drlg.
Moore, E. H., No. 2 Sugar, Santa Maria, Santa Barbara	19-10-34	2,473	sd. sh. drlg.
Ohio Oil, No. 1-M Santa Maria, Santa Barbara Co.	21-10-34	3,971	pump. 141 b.d.
Union Oil, No. 4 Battle, Santa Maria, Santa Barbara	24-10-34	2,709	cleaning out
Union Oil, No. 4 Vincent, Santa Maria, Santa Barbara	30-10-33	1,994	sd. sh. drlg.
Union Oil, No. 2 LeRoy, Santa Maria, Santa Barbara	24-10-35	4,124	sd. sh. drlg.
Pac. Western Oil, No. 2 Santa Maria, Santa Barbara	21-10-34	3,396	sd. sh. drlg.
Rice Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,330	P.B. 3,732
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	3,206	br. sh. drlg.
Tide Water A. O., No. 1-L Santa Rita, Santa Barbara	3- 6-33	3,287	sd. sh. drlg.
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	5,918	hd. sh. drlg.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	6,373	reaming
Field, O. C., No. 1-S.R., Lompoc, Santa Barbara Co.	11- 7-33	2,396	bl. sh. drlg.
United Western Oil, No. 1 Los Olivos, Santa Barbara	15- 7-30	2,008	sd. sh. drlg.
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,570	milling
Petroleum Securities, No. 6 Ranch, Shiells, Ventura	3- 3-19	3,197	sd. sh. drlg.
Texas Co., No. 133 Shiells, Ventura Co.	4- 3-19	4,128	recmtd. 4,123
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-20	6,225	cmtd. 5,803
Texas Co., No. 1 Pierce, Camarillo, Ventura Co.	20- 2-21	4,097	hd. sh. drlg.
Richfield Oil, No. 1 McFarland, Camarillo, Ventura	13- 2-21	3,461	hd. sh. drlg.
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	2,088	rig. to pump
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	1,502	cleaning out
Williamson Oil, No. 1 Sespe, Ventura Co.	1- 4-20	312	hd. sd. drlg.
Section 20 Oil, No. 1 Sespe, Ventura Co.	20- 5-19	197	sd. sh. drlg.
Speik Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,050	sd. sh. drlg.
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	3,400	fishing
Topa Topa Oil, No. 3 Sespe, Ventura Co.	33- 5-19	4,050	cleaning out
Commander Oil, No. 7-F Piru, Ventura Co.	13- 4-19	286	sd. sh. drlg.
Skyline Oil, No. 1-H Hopper Canyon, Ventura Co.	13- 4-18	871	cleaning out
Vai, Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	1,397	hd. sh. drlg.
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	7,480	fish. D.P.
Continental Oil, No. 4 Padre Canyon, Ventura Co.	15- 3-24	2,196	sd. sh. drlg.
C. C. M. Oil, No. 16 Rincon, Ventura Co.	8- 3-24	3,198	hd. sh. drlg.
Richfield Oil Corp., No. 2 Hobson, Rincon, Ventura	8- 3-24	4,788	flow. 280 b.d.
Rincon Pet., No. 1 Shudde, Rincon, Ventura Co.	tideland	2,850	idle
Oxnard Oil, No. 1 Oxnard, Ventura Co.	10- 1-22	5,740	sd. sh. drlg.
Rowe, W. G., No. 1 Johnson, Oxnard, Ventura Co.	15- 1-22	1,992	sd. sh. drlg.
Vaca Oil, No. 2 Oxnard, Ventura Co.	6- 1-21	3,985	br. sh. drlg.
Tide Water A. O., No. 28 V.L.W., Ventura, Ventura	26- 3-23	6,581	sd. sh. drlg.
Tide Water A. O., No. 30 Lloyd, Ventura, Ventura	27- 3-23	4,340	cmtd. 4,182
Tide Water A. O., No. 61 Lloyd, Ventura, Ventura	27- 3-23	6,586	sd. sh. drlg.
Tide Water A. O., No. 62 Lloyd, Ventura, Ventura	27- 3-23	5,850	sd. sh. drlg.
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	9,750	sd. sh. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	6,290	sd. sh. drlg.
Shell Oil, No. 90 Taylor, Ventura Co.	30- 3-23	6,541	O.S. drlg.
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	8,176	redrlg. 7,891
General Pet., No. 13 Notten, Ventura, Ventura Co.	28- 3-23	9,484	redrlg. 7,665
Den Petroleum, No. 1 Devils Den, Kern Co.	20-25-19	4,676	br. sh. drlg.
Goodrum, George, No. 1 Devils Den, Kern Co.	24-25-18	300	br. sh. drlg.
Tide Water A. O., No. 10-E-3 Lost Hills, Kern Co.	3-26-20	1,792	sd. sh. drlg.
Standard Oil, No. 4 United, Lost Hills, Kern Co.	2-26-20	1,296	rig. to pump
Argo Pet., No. 1-F Lost Hills, Kern Co.	11-26-20	1,294	looks wet
Texas Co., No. 1-A Overall, Lost Hills, Kern Co.	33-25-20	2,459	dry; abd.
Birch-Ranch Oil, No. 1 Lovett, McKittrick, Kern Co.	10-30-21	3,230	sd. sh. drlg.
Standard Oil, No. 2 Randolph, Semi-Tropic, Kern Co.	14-27-23	1,631	sd. sh. drlg.
Continental Oil, No. 2 Wasco, Kern Co.	8-27-24	10,680	sd. sh. drlg.
Belridge Oil, No. 43-26 North Belridge, Kern Co.	26-27-20	5,872	br. sh. drlg.
Belridge Oil, No. 53-26 North Belridge, Kern Co.	26-27-20	5,997	br. sh. drlg.
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	7,925	br. sh. drlg.
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	7,550	br. sh. drlg.
Tide Water A. O., No. 6 North Belridge, Kern Co.	34-27-20	8,738	flow. 3,727 b.d.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	7,930	br. sh. drlg.
General Pet., No. 1 St. Helens, Belridge, Kern Co.	12-28-20	304	sd. sh. drlg.
Shell Oil, No. 1 L. Olcese, Round Mountain, Kern Co.	21-28-29	1,842	pump. 20 b.d.
Shell Oil, No. 15 Freeman, Round Mountain, Kern Co.	20-28-29	1,860	O.S. drlg.
Honolulu Oil, No. 15 Round Mountain, Kern Co.	20-28-29	1,858	O.S. drlg.
Honolulu Oil, No. 25 Round Mountain, Kern Co.	18-28-29	1,915	milling
Tampico Pet., No. 3 Round Mountain, Kern Co.	17-28-29	905	sd. sh. drlg.
Tavis, J. J., No. 1 Round Mountain, Kern Co.	4-29-29	3,300	gr. sd. drlg.
Cal-Western Oil, No. 5 C.C., Round Mountain, Kern	12-28-28	1,881	sd. sh. drlg.
McDonald, H. A., No. 1 Larkin, Round Mountain, Kern	12-28-28	1,430	sd. sh. drlg.
Oils, Inc., of California, No. 7-2 Kern Front, Kern Co.	13-28-27	1,289	P.B. 1,135
Malone, F. H., No. 3 Mabry, Kern Front, Kern Co.	4-28-27	1,800	gr. sd. drlg.
Tide Water A. O., No. 8 Wilcox, Kern Front, Kern Co.	4-28-27	2,789	sd. sh. drlg.
California Star Oil, No. 2-80 Kern Front, Kern Co.	22-28-27	2,650	pump. 198 b.d.
California Star Oil, No. 3-80 Kern Front, Kern Co.	22-28-27	496	sd. sh. drlg.
Texas Co., No. 9 Lehman, Kern Front, Kern Co.	23-28-27	2,065	scrape hole
Shell Oil, No. 1 Bellview, Kern Co.	31-29-27	9,185	dry; abd.
Well Developers, Inc., No. 1 Kern River, Kern Co.	16-28-28	2,780	sd. sh. drlg.
Fuhrman, A., No. 10 Kern River, Kern Co.	28-28-28	521	sd. sh. drlg.
McKeon, Inc., No. 1-A Kern River, Kern Co.	32-28-28	1,275	idle
Vedder, D. G., No. 1 B.M.B., Mount Poso, Kern Co.	32-26-28	1,691	O.S. drlg.
Trico O. & G., No. 1 Modoc, Mount Poso, Kern Co.	20-26-28	1,870	may abdn.
Ring Oil, No. 1 Blackfoot, Mount Poso, Kern Co.	32-26-28	1,810	O.S. drlg.
Vedder Pet., No. 29-1 Bowles, Mount Poso, Kern Co.	29-26-28	1,795	cleaning out
Vedder Pet., No. 29-2 Bowles, Mount Poso, Kern Co.	29-26-28	1,807	rig. to pump
Pacific O. & G., No. 1 Davidson, Mount Poso, Kern Co.	36-27-27	2,849	sd. sh. drlg.
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	fish. D.P.
Desert Glow Oil, No. 2 Mount Poso, Kern Co.	14-27-27	1,363	sd. sh. drlg.
Union Oil, No. 12 Tribe, Mount Poso, Kern Co.	28-27-28	1,855	sd. sh. drlg.
H. & H. Oil, No. 1 Neff, Fruitvale, Kern Co.	23-29-27	3,793	fish. D.P.
Meridian Oil, No. 5 Turner, Fruitvale, Kern Co.	23-29-27	3,050	pump. 350 b.d.
Western Gulf Oil, No. 8 Red Ribbon, Fruitvale, Kern	27-29-27	3,425	sd. sh. drlg.
Western Gulf Oil, No. 27 K.C.L., Fruitvale, Kern Co.	22-29-27	3,900	sd. sh. drlg.
Sandy Oil, No. 2 Fruitvale, Kern Co.	26-29-27	3,590	P.B. 3,570
Section Six, No. 1 Mountain View, Kern Co.	6-31-29	4,798	sd. sh. drlg.
Ohio Oil, No. 6 Derby, Mountain View, Kern Co.	33-30-29	2,791	sd. sh. drlg.
Barnsdall Oil, No. 2-N Mountain View, Kern Co.	19-30-29	4,841	cleaning out
Wood-Callahan Oil, No. 1 Harvey, Mtn. View, Kern	31-30-29	1,998	sd. sh. drlg.
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	4-31-29	6,557	rig. to pump
Hogan Pet., No. 3 Peters, Mountain View, Kern Co.	5-31-29	5,460	P.B. 5,240
Hogan Pet., No. 9 Wharton, Mountain View, Kern Co.	32-30-29	4,570	sd. sh. drlg.
Greer, P. H., No. 1 Perrel, Mountain View, Kern Co.	9-31-29	5,502	swabbing
General Pet., No. 2 Freeport, Mountain View, Kern	19-30-29	4,495	sd. sh. drlg.
Monterey Expl., No. 7 Duff, Edison, Kern Co.	15-30-29	1,699	sd. sh. drlg.
General Pet., No. 1 Houchin, Arvin, Kern Co.	27-31-29	5,997	sd. sh. drlg.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	redrlg. 7,942
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	10,620	sd. sh. drlg.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	10,210	sidetrack 6,260
Superior Oil, No. 9 KCL, Greeley, Kern Co.	3-30-26	6,797	sd. sh. drlg.
Standard Oil, No. 11-8 KCL, Greeley, Kern Co.	18-29-26	7,196	sd. sh. drlg.
Standard Oil, No. 12-2 KCL, Greeley, Kern Co.	16-29-26	7,380	sd. sh. drlg.
Standard Oil, No. 1-F Greeley, Kern Co.	20-29-26	2,497	sd. sh. drlg.
Shell Oil, No. 4-30 Ten Section, Kern Co.	33-30-26	8,236	O.S. drlg.
Shell Oil, No. 61-31-B Ten Section, Kern Co.	30-30-26	7,373	br. sh. drlg.
Lilly Oil, No. 1 Midway-Sunset, Kern Co.	36-32-23	2,357	pump. 195 b.d.
Merritt Annex Oil, No. 6 Midway-Sunset, Kern Co.	25-12-24	1,962	sd. sh. drlg.
C. C. M. Oil, No. 25-21 Midway-Sunset, Kern Co.	21-32-23	2,730	rig. to pump
C. C. M. Oil, No. 43-21 Midway-Sunset, Kern Co.	21-32-23	2,716	bailing
C. C. M. Oil, No. 1-U.S., Midway-Sunset, Kern Co.	30-32-24	2,635	br. sh. drlg.
Hallmark Oil, No. 7 Midway-Sunset, Kern Co.	25-12-24	2,631	sd. sh. drlg.
Richfield Oil, No. 13 Fellows, Midway-Sunset, Kern	6-32-23	1,874	sd. sh. drlg.
Wreden Pet., No. 1 Midway-Sunset, Kern Co.	12-11-24	1,492	cleaning out
Standard Oil, No. 37-23-D Midway-Sunset, Kern Co.	23-32-24	3,450	sd. sh. drlg.
Texas Co., No. 1 Pioneer, Midway-Sunset, Kern Co.	33-11-23	2,000	sd. sh. drlg.
Texas Co., No. 24 Midway-Sunset, Kern Co.	32-32-24	3,155	rig. to pump
U. S. Pumping Equip., No. 2 Midway-Sunset, Kern Co.	12-11-24	769	sd. sh. drlg.
Transco Drlg., No. 4 Grimm, Midway-Sunset, Kern	25-32-23	2,561	idle
Richfield Oil, No. 1-A Buena, Elk Hills, Kern Co.	7-31-25	3,700	idle
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	4,607	idle
Seaboard Oil, No. 1 Firebaugh, Madera Co.	27-12-25	4,974	sd. sh. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	11,097	gr. sd. drlg.
K. N. D. A., No. 47-28-J Kettleman North, Fresno Co.	28-21-17	8,140	flow. 2,160 b.d.
K. N. D. A., No. 41-4-P Kettleman North, Fresno Co.	4-22-17	7,760	gr. sd. drlg.
K. N. D. A., No. 83-4-P Kettleman North, Fresno Co.	4-22-17	6,751	fish. D.P.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored
C.D., corrected depth
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., plugging big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shut off no good
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

K. N. D. A., No. 27-12-P Kettleman North, Kings Co.	12-22-17	4,587	sd. sh. drlg.
K. N. D. A., No. 6-6-Q Kettleman North, Kings Co. ..	6-22-18	6,440	br. sh. drlg.
K. N. D. A., No. 27-6-Q Kettleman North, Kings Co.	6-22-18	5,780	sd. sh. drlg.
Standard Oil, No. 27-33-J Kettleman North, Fresno	33-21-17	6,840	br. sh. drlg.
Standard Oil, No. 4-3-P Kettleman North, Kings Co.	3-22-17	8,020	flow. 1,162 b.d.
Standard Oil, No. 2-11-P Kettleman North, Kings Co.	11-22-17	4,983	sd. sh. drlg.
Temblor Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	8,100	gr. sh. drlg.
Dudley Ridge Dev., No. 1 Tulare Lake, Kings Co. ..	24-23-20	3,862	will test
Burkholder Oil, No. 1 Panorama, San Luis Obispo Co.	14-10-26	4,035	rig burned
Hancock Oil, No. 1 Huasna, San Luis Obispo Co. ...	30-12-33	1,890	sd. sh. drlg.
Lewis, A. O., No. 1 Pecho, Huasna, San Luis Obispo	34-30-10	2,772	flow. water
Elba Oil, No. 1 Pajaro, Monterey Co.	6-13-2	3,920	circulate oil
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	2,640	br. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	5,480	flow. gas
Standard Oil, No. 1 Delano, Tulare Co.	36-24-23	8,030	sd. sh. drlg.
Magnet O. & G., No. 1 Delano, Tulare Co.	29-24-24	6,021	sd. sh. drlg.
Tulare Dome Oil, No. 1 Allensworth, Tulare Co. ...	17-21-23	3,125	will redrl.
Jennings, E. P., No. 2 Allensworth, Tulare Co.	33-23-23	2,765	gr. sh. drlg.
Standard Oil, No. 1 Hooper, Woodland, Yolo Co.	32- 9-1	3,876	fish. D.P.
Standard Oil, No. 1 Cook, Dunnigan, Yolo Co.	32-12-1	2,389	dry; abd.
Empire O. & G., No. 1 Woodland, Yolo Co.	8- 9-3	231	sd. sh. drlg.
Wilshire Oil, No. 1 Half Moon Bay, San Mateo Co.	20- 6-5	1,100	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 1 Howard, Los Angeles Co.	7- 3-14	4,893	sd. sh. drlg.
Richfield Oil, No. 1-SF El Segundo, Los Angeles Co.	18- 3-14	7,690	P.B. 7,615
Richfield Oil, No. 2 Elsie, El Segundo, Los Angeles	12- 3-15	6,987	Schist
Union Oil, No. 3 El Segundo, Los Angeles Co.	18- 3-14	7,480	O.S. drlg.
Sunshine Oil, No. 1 El Segundo, Los Angeles Co.	12- 3-15	6,892	sd. sh. drlg.
Tide Water A. O., No. 1 El Segundo, Los Angeles Co.	8- 3-14	4,161	sd. sh. drlg.
Ohio Oil, No. 6 Gough, El Segundo, Los Angeles Co.	7- 3-14	7,413	flow. 3,629 b.d.
Ohio Oil, No. 7 Gough, El Segundo, Los Angeles Co.	7- 3-14	6,987	sd. sh. drlg.
Texas Co., No. 3 Security, El Segundo, Los Angeles	18- 3-14	7,162	tested wet
Texas Co., No. 4 Security, El Segundo, Los Angeles	18- 3-14	7,233	flow. 3,460 b.d.
Royalty Service, No. 2 El Segundo, Los Angeles Co.	7- 3-14	7,368	flow. 290 b.d.
Standard Oil, No. 2 Refinery, El Segundo, Los Angeles	13- 3-15	6,981	sd. sh. drlg.
Standard Oil, No. 3 Refinery, El Segundo, Los Angeles	13- 3-15	6,990	sd. sh. drlg.
Pacific Western Oil, No. 1 El Segundo, Los Angeles	7- 3-14	6,870	cleaning out
Getty Oil, No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,119	may abdn.
Republic Pet., No. 2 El Segundo, Los Angeles Co. ...	18- 3-14	7,587	pump. 15 b.d.
Douglas Oil, No. 9 Peck, Lawndale, Los Angeles Co.	20- 3-14	7,340	P.B. 7,270
Young & Bryan, No. 1 Peck, Lawndale, Los Angeles	20- 3-14	7,247	flow. salt wtr.
Standard Oil, No. 84 L.A.I., Inglewood, Los Angeles	17- 2-14	1,455	sd. sh. drlg.
Keystone Oil, No. 2 Torrance, Los Angeles Co.	8- 4-14	2,872	idle
B. C. L. Oil, No. 1 Torrance, Los Angeles Co.	5- 4-14	3,260	cmtd. 3,162
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,691	br. sh. drlg.
Loma Verde Oil, No. 12 Torrance, Los Angeles Co. ..	16- 4-14	4,981	P.B. 4,780
Hunter & Co., No. 1 Palos Verdes, Los Angeles Co. ..	17- 4-14	3,195	sd. sh. drlg.
Tide Water A. O., No. 4 Cypress, Potrero, Los Angeles	34- 2-14	2,781	sd. sh. drlg.
Shell Oil, No. 92 Reyes, Dominguez, Los Angeles Co.	33- 3-13	4,590	sd. sh. drlg.
Shell Oil, No. 49 Reyes, Dominguez, Los Angeles Co.	33- 3-13	5,237	sd. sh. drlg.
Tide Water A. O., No. 14 Dominguez, Los Angeles Co.	34- 3-13	4,367	pump. 348 b.d.
Union Oil, No. 54 Callender, Dominguez, Los Angeles	33- 3-13	7,697	flow. 1,246 b.d.
Union Oil, No. 56 Callender, Dominguez, Los Angeles	33- 3-13	7,320	sd. sh. drlg.
Union Oil, No. 57 Callender, Dominguez, Los Angeles	33- 3-13	2,174	sd. sh. drlg.
Union Oil, No. 47 Hellman, Dominguez, Los Angeles	33- 3-13	6,700	sd. sh. drlg.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	7,540	P.B. 6,925
Barnsdall Oil, No. 17 O'Dea, Rosecrans, Los Angeles	18- 3-13	7,079	flow. 150 b.d.
Union Oil, No. 17 Rosecrans, Los Angeles Co.	18- 3-13	3,982	sd. sh. drlg.
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co. ...	17- 3-13	7,747	redrlg. 7,094
Bolsa Chica Oil, No. 1 Rosecrans, Los Angeles Co. ...	20- 3-13	7,944	P.B. 7,270
Union Oil, No. 19 D.R., Playa Del Rey, Los Angeles	27- 2-15	6,213	pump. 496 b.d.
Sharby Oil, No. 1 Playa Del Rey, Los Angeles Co. ...	22- 2-15	7,524	form. test
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	2,077	sd. sh. drlg.
Barnsdall Oil, No. 2-S.F., Newhall, Los Angeles Co.	26- 4-17	5,084	fish. D.P.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	6,250	reaming
General Pet., No. 12 Ford, Wilmington, Los Angeles	4- 5-13	2,440	sd. sh. drlg.
General Pet., No. 17 Ford, Wilmington, Los Angeles	4- 5-13	4,570	sd. sh. drlg.
General Pet., No. 20 Ford, Wilmington, Los Angeles	4- 5-13	4,100	flow. 5,720 b.d.
General Pet., No. 22 Ford, Wilmington, Los Angeles	4- 5-13	2,125	sd. sh. drlg.
General Pet., No. 23 Ford, Wilmington, Los Angeles	4- 5-13	3,000	sd. sh. drlg.
General Pet., No. 4 Isco, Wilmington, Los Angeles	4- 5-13	2,596	sd. sh. drlg.
Baker Oil, No. 1 Wilmington, Los Angeles Co.	33- 4-13	146	sd. sh. drlg.
Bankline Oil, No. 10-P.T., Wilmington, Los Angeles	34- 4-13	2,175	sd. sh. drlg.
Bankline Oil, No. 15-P.T., Wilmington, Los Angeles	34- 4-13	3,318	flow. 812 b.d.
Bankline Oil, No. 22-D.H., Wilmington, Los Angeles	34- 4-13	3,342	flow. 310 b.d.
Bankline Oil, No. 25-D.H., Wilmington, Los Angeles	34- 4-13	1,997	sd. sh. drlg.
Bankline Oil, No. 3-C.Y., Wilmington, Los Angeles	34- 4-13	3,060	sd. sh. drlg.
Black Gold Oil, No. 4-B Wilmington, Los Angeles Co.	32- 4-13	2,960	sd. sh. drlg.
Caminol Oil, No. 1-P Wilmington, Los Angeles Co. ..	33- 4-13	164	sd. sh. drlg.
Crude Oil Drlg., No. 1-W.P., Wilmington, Los Angeles	33- 4-13	1,157	sd. sh. drlg.
Exeter Oil, No. 1 Banning, Wilmington, Los Angeles	32- 4-13	2,995	sd. sh. drlg.
Macmillan Pet., No. 7-H Wilmington, Los Angeles	32- 4-13	2,797	sd. sh. drlg.
McDonald & Burns, No. 1 Wilmington, Los Angeles	32- 4-13	3,620	sd. sh. drlg.
O'Dell & Dunlap, No. 1 Wilmington, Los Angeles Co.	33- 4-13	2,672	sd. sh. drlg.
Pac. Western, No. 1 Weldt, Wilmington, Los Angeles	33- 4-13	2,681	sd. sh. drlg.
Pongratz, No. 2 Banning, Wilmington, Los Angeles	33- 4-13	2,240	sd. sh. drlg.
Ring Oil, No. 5 Wilmington, Los Angeles Co.	33- 4-13	2,690	sd. sh. drlg.
Royalty Serv., No. 4-A-S.F., Wilmington, Los Angeles	33- 4-13	3,601	flow. 230 b.d.
Royalty Serv., No. 16-7-2 Wilmington, Los Angeles	32- 4-13	3,120	flow. 204 b.d.
Royalty Serv., No. 1-P.E., Wilmington, Los Angeles	33- 4-13	3,568	flow. 180 b.d.
Texas Co., No. 1 Refinery, Wilmington, Los Angeles	34- 4-13	3,500	completing
Union Pacific, No. 20 Wilmington, Los Angeles Co.	3- 5-13	4,090	flow. 7,717 b.d.
Union Pacific, No. 22 Wilmington, Los Angeles Co.	34- 4-13	3,040	sd. sh. drlg.
Union Pacific, No. 37 Wilmington, Los Angeles Co.	33- 4-13	3,521	sd. sh. drlg.
Union Pacific, No. 41 Wilmington, Los Angeles Co.	34- 4-13	2,782	sd. sh. drlg.
Union Pacific, No. 57 Wilmington, Los Angeles Co.	4- 5-13	2,287	sd. sh. drlg.
Union Pacific, No. 58 Wilmington, Los Angeles Co.	4- 5-13	3,080	sd. sh. drlg.
Union Pacific, No. 4-C Wilmington, Los Angeles Co.	33- 4-13	2,790	sd. sh. drlg.
Camroo Oil, No. 1 Stearns, Pomona, Los Angeles Co.	33- 1-9	1,121	sd. sh. drlg.
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	2,492	gr. sd. drlg.
Hillidon Oil, No. 2 Bixby, Flood Control, Los Angeles	13- 4-13	4,126	O.S. drlg.
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	4,843	bailing
Richfield Oil, No. 10 Denni, Long Beach, Los Angeles	19- 4-12	4,976	bailing
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	5,728	sd. sh. drlg.
Union Oil, No. 100 Santa Fe Springs, Los Angeles Co.	6- 3-11	10,789	redrlg. 10,219
Texas Co., No. 7-W Santa Fe Springs, Los Angeles Co.	6- 3-11	6,470	fish. D.P.
Continental Oil, No. 40 Bixby, Seal Beach, Orange Co.	2- 5-12	4,608	recmtd. 4,603
Wilshire Oil, No. 1-A Huntington, Orange Co.	10- 6-11	4,930	pump. 448 b.d.
Wilshire Oil, No. 6-B Huntington, Orange Co.	10- 6-11	5,375	completing
Standard Oil, No. 15 Thomson, Huntington, Orange	12- 6-11	3,791	sd. sh. drlg.
Johnston Drlg., No. 1 Sunset Beach, Orange Co.	20- 5-11	5,564	sd. sh. drlg.
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	5,930	P.B. 5,093
Brea Canyon Oil, No. 36 Brea Canyon, Orange Co.	2- 3-10	4,000	redrlg. 3,140
Standard Oil, No. 127 Murphy, West Coyote, Orange	18- 3-10	984	sd. sh. drlg.
Bartholomae Oil, No. 5 East Coyote, Orange Co.	22- 3-10	4,471	hd. sd. drlg.
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	3,615	pump. 20 b.d.
Tide Water A. O., No. 42 East Coyote, Orange Co.	22- 3-10	3,650	bailing
Standard Oil, No. 2-16 Kraemer, Richfield, Orange Co.	29- 3-9	4,850	P.B. 4,740
Union Oil, No. 29 Chapman, Richfield, Orange Co.	30- 3-9	8,610	redrlg. 7,781
Hjorth & Mohr, No. 1 Yorba, Orange Co.	22- 3-9	1,359	sd. sh. drlg.
Beverly Hills Pet., No. 1 Fricke, Yorba, Orange Co.	21- 3-9	1,529	hd. sd. drlg.
Mid-State Pet., No. 1 Yorba, Orange Co.	22- 3-9	1,740	O.S. drlg.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	6,070	redrlg. 4,176
Shell Oil, No. 1-H Anaheim, Orange Co.	9- 4-10	5,897	sd. sh. drlg.

KANSAS

Week Ending September 18 (Descriptions are East unless marked otherwise)

Barber County

Helmerich & Payne et al No. 1 Blunk Est., C SE sec. 18-34-13w. Drlg. 3,385 ft.
Olson Oil Co. and Skelly Oil Co. No. 1 Elsea, SW SE NW sec. 27-32-14w. Drlg. 4,612 ft.
W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. Drlg. 4,862 ft.

Barton County

Armer & Vernon Oil & Gas Co. No. 1 Persons, SW SW SE sec. 7-17-13w. Fsg. 2,835 ft.
Brouk and National Ref. Co. No. 1 Gory, NW SW sec. 10-17-13w. Drlg. 1,170 ft.
C. L. Price No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,413-27 ft.; 1,800 B. O. and 3½ B.W. every other day.
Shell Pet. Corp. No. 1 Peterman, SE NE SE sec. 13-16-14w. Drlg. 2,767 ft.
Vickers Pet. Co. No. 1 Lucas, NW NW NE sec. 16-17-14w. Drlg. 3,420 ft.
Ralph Wixson et al No. 1 Buhrle, SE SE NE sec. 14-16-13w. Drlg. 3,075 ft.

Butler County

Rex & Morris et al No. 1 Stephens, SW SW SE sec. 35-23-3e. Drlg. 2,260 ft.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. T.D. 1,940 ft.; P.B. 1,545 ft.
W. G. Buffington No. 1 Fisher, CWL SW NW sec. 10-34-9e. Drlg. 1,050 ft.
C. R. Craft No. 1 Lagree, SE NW NE sec. 8-32-12e. T.D. 2,080 ft.; P.B. 687 ft.
Harrison No. 1 Brown, NE SE NE sec. 19-34-10. S.D. 510 ft.
Robinson et al, No. 1 Foster, SW cor. sec. 6-33-12. Sil. 1,981 ft. (cor.); T.D. 1,986 ft.; P. 15 B.O. and 12 B.W. daily; comp.
S. H. Vineard No. 1 Hughes, NE NE SE sec. 13-32-12. Drlg. 150 ft.

Cowley County

Arthur Brewer No. 1 Starkey, SW NE sec. 16-30-4. Drlg. 1,550 ft.
Pryor & Lockhart No. 1 Brown, NE SE SE sec. 34-33-3e. Drlg. 2,295 ft.
E. B. Shawver No. 1 fee, NW NE SE sec. 3-30-4e. T.D. 2,828 ft.; Pot. 96 B.O.; comp.

Edwards County

Douglas & Gear et al No. 1 Meade, SE SE NW sec. 33-25-16w. Sil. 4,768-98 ft.; S.D.O.

Elk County

Coronado Oil Co. No. 1 Atkinson, SW NE SW sec. 22-29-10e. T.D. 1,400 ft.; D.&A.

Ellis County

Aylward Prod. Co. et al No. 1 Berens, SE SE sec. 10-14-16w. Spd.
Billings No. 1 Smith, SE SE NW sec. 14-12-16w. Sil. 3,356 ft.; T.D. 3,385 ft.; acd.; comp. for old potential, 572 B.O.
Brunson Drlg. Co. et al No. 1 Weisner, SE SW SE sec. 31-13-17w. Drlg. 3,100 ft.
Buffalo Oil Co. No. 1 Phillip, NE NE sec. 18-14-16w. Set 6-in. 3,429 ft.; T.D. 3,446 ft.; C.O.
Colonial Oil Co. and Bernheimer No. 1 Albert, SW SW NE sec. 31-12-18w. S.D. 1,260 ft.
Lario O. & R. Co. No. 1 Bell, NW NW NE sec. 8-12-18w. Drlg. 1,725 ft.
L. M. Reynolds No. 1 Polcyn, SE SE NE sec. 24-13-16w. Drlg. 2,616 ft.
P. G. Reynolds et al No. 1 Karlin, NW cor. sec. 13-12-18w. Drlg. 2,330 ft.
C. E. W. Skiles et al No. 1 Jensen, SW SE NE sec. 26-12-18w. S.D. 2,895 ft.
Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18w. H.F.W. 3,290-92 ft.; U.R. 6-in.

Ellsworth County

Equity Gas Co. No. 1 Razac, NE NE SE sec. 31-15-10w. C.O. 3,002 ft.
Hinkle et al No. 1 Alden, SE SE SW sec 17-17-10w. Spd.

Grant County

United Prod. Co. No. 1 Blake, C SW sec. 21-30-36w. T.D. 2,751 ft.; P.B. 2,570 ft.; 2,300,000 ft. gas; comp.

Greenwood County

Ward McGinnis et al No. 1 Henly Estate SW cor. sec. 25-25-9. T.D. 2,234 ft.; H. F.W.; P.B.; cmt. 6-in.
Ward McGinnis et al No. 1 Smith & Jobes, NW NW SE sec. 10-24-13e. Set 6-in. 1,613 ft.; T.D. 1,633 ft.; W.O.C.
S. Van Devanter et al No. 1 Dove, NE SE SW sec. 12-28-11. Drlg. 615 ft.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. Set 8-in. 1,465 ft.; C.O.

Kingman County

Carter Oil Co. No. 1 Davis, C E½ NE NE sec. 24-28-8w. Drlg. 3,563 ft.

Logan County

Morgan, Flynn, Cobb et al No. 1 McMillen, C NW sec. 9-13-37w. S.D. 3,489 ft. for repairs.

Lyon County

Arthur Sory No. 1 Byrd, SW SW SE sec. 32-21-11. T.D. 1,914 ft.; 450 ft. O.I.H. and S.S.W.

Marion County

Hutchinson O. & G. Co. et al No. 1 Ehrmann, SE SE SW sec. 15-18-1e. Sil. 3,370 ft.; T.D. 3,430 ft.; D.&A.
Western Kansas O. & R. Co. et al No. 1 Suderman, SE SW NW sec. 22-20-2e. H.F.W. 3,025-30 ft.

McPherson County

C. E. Ash Drlg. Co. No. 1 Broman, NE NE NW sec. 19-17-4w. S.D. 2,485 ft.
H. C. Becker No. 1 Mason, SW NE sec. 9-17-1w. S.D. 690 ft.
Dudley Bros. No. 1 Barnholt, SW SW SE sec. 30-20-5w. Chat 3,292 ft.; T.D. 3,335 ft.; P. 115 B.O. in 14 hrs.; down 5 hrs.
Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. Set 8-in. 2,775 ft.; S.D.
Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. S.D. 1,850 ft.

Meade County

Pacific Mid-West Co. No. 1 Rexford, NE SE SW sec. 8-30-29w. Drlg. 900 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. S.D. 4,022 ft.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. Drlg. 1,860 ft.
Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Inc. oil 4,400-02 ft.; 3,500 ft. O.I.H. at 4,406 ft.; S.D.

Osborne County

Fred C. Chaddox and Atlantic Ref. Co. No. 1 Slater, NE SW NE sec. 33-10-15w. C.O. 2,490 ft.
F. E. Fullerton & Son No. 1 Moray, NE SE SW sec. 27-10-12w. Set 13-in. at 50 ft.; W.O.C.

Phillips County

C. W. Davidson et al No. 1 Elliff, SE NE NE sec. 35-5-18w. S.D. 350 ft.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. T.D. 4,437 ft.; P.B. 4,297 ft.
Skelly Oil Co. et al No. 1 Adams, SE NW NE sec. 2-28-11w. Drlg. 3,915 ft.
Stanolind O. & G. Co. No. 1 Hartsell, NW SW sec. 14-26-12w. Drlg. 1,575 ft.

Reno County

Carey et al o. 1 McPheeters, NE NE NW sec. 22-26-8w. Spd. and S.D.
Sam Schneider et al No. 1 Kroecker, NE cor. sec. 12-22-5w. Drlg. 1,965 ft.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Simp. 3,591 ft.; Sil. 3,643 ft.; T.D. 3,662 ft.
Boyle & Grossman No. 1 Diener, SE NE sec. 35-19-1w. Drlg. 535 ft.
Gerbrand-Pulse Oil & Drilling Co. No. 1 Wellman, SW cor. sec. 22-21-9w. S.D. 2,544 ft.
Gillespie et al No. 1 Strong, NE NW sec. 9-18-8w. Spd. and S.D.
John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. S.D. 1,515 ft.
H. V. Holland et al No. 1 Brothers, SE cor. sec. 12-21-7w. T.D. 3,469 ft.; Pot. 627 B.O.; comp.
Skiles et al No. 1 Campbell, SE SE NE sec. 28-19-9w. U.R. 8-in. 2,472 ft.
W. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. Fsg. 4,245 ft.

Rooks County

C. R. Craft et al No. 1 Ziegler, NE SW sec. 8-10-16w. C.O. 2,860 ft.
Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,326 ft.; p. 39 B.O. and 48 B.W. in 8 hrs.; C.O.
J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. C.O. 3,875 ft.

Rush County

Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft. sulfur water in hole in 2½ hrs.; T.D. 3,512 ft.; S.D.O.
Earl Wakefield et al No. 1 Zimmerman, SE SE SW sec. 7-16-18w. S.D. 3,105 ft.

Russell County

Boyle & Grossman No. 1 Deines, SE SE SW sec. 36-15-15w. Sil. 3,451 ft.; H.F.W. 3,471-76 ft.; T.D. 3,179 ft.
Cities Service Oil Co. et al No. 1 Eichman, SW SE sec. 12-15-14w. Drlg. 1,965 ft.
Cities Service Oil Co. and Texas Co. No. 1 Boxberger B, NE cor. sec. 23-13-15w. Drlg. 2,525 ft.
Emrichs et al No. 1 Anderson, NE SE SW sec. 33-15-11w. Spd. and S.D.

Parks No. 1 Opdycks, SW cor. sec. 20-14-13w. S.D. 260 ft.
Trapp Drlg. Co. et al No. 1 Polcyn, NE SE sec. 34-14-15w. Drlg. 810 ft.
Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Sedgwick County

Fulton et al No. 1 fee, NE SE sec. 35-28-1e. T.D. 765 ft.; fsg.
McKnab No. 1 Garrett, SE SW SW sec. 18-29-2e. Spd.
I. W. Murfin et al No. 1 Martin, SE NW sec. 32-28-1e. Drlg. 1,610 ft.
National Ref. Co. No. 1 fee, SE NE SE sec. 26-27-2e. U.R. 12-in. 1,080 ft.
Palmer Oil Corp. No. 1 Royal, NE cor. sec. 15-28-1w. T.D. 3,899 ft.; S.D.O.
W. G. Talbott et al No. 1 Downs Est., SE SE NW sec. 32-28-2e. T.D. 2,229 ft.; 7,500,000 ft. gas.
Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 1,275 ft.

Stafford County

W. P. Faulkner No. 1 Moses, NW SW sec. 9-22-13w. Drlg. 905 ft.
Kessler et al No. 1 Jenkins, SE NE sec. 15-25-12w. Drlg. 3,190 ft.
Fred P. Rust et al No. 1 Johnson, NW SW sec. 29-25-12w. Drlg. 1,800 ft.
Newman & Winemiller No. 1 Sittner, NE cor. sec. 33-21-12w. Set 7-in. 3,360 ft.; acd.; pot. 1,408 B.O.; comp.
E. J. Shaffer No. 1 Spencer, NW SW sec. 3-25-14w. Drlg. 4,250 ft.
Stanolind O. & G. Co. et al No. 1 Hartnett, NW NW NE sec. 23-24-11w. T.D. 3,807 ft.; pot. 974 B.O.; comp.

Sumner County

Cities Service Oil Co. No. 1 McCoy, SE SW sec. 11-35-2e. Spd.
Magnolia Pet. Co. No. 1 Baird, SW SE SE sec. 2-30-4w. Set 16-in. csg. 295 ft.; W.O.C.
W. M. McKnab No. 1 Blair, SW cor. sec. 7-30-1e. Drlg. 3,100 ft.
R. J. Wixson No. 1 Newton, SE SE sec. 21-30-2e. Run 7-in. 1,975 ft.

Trego County

Central Commercial Oil Co. No. 1 Locker, C SW sec. 12-14-22w. Drlg. 2,215 ft.
Phillips Pet. Co. No. 1 Trego, C SE SW sec. 14-12-23w. Drlg. 3,853 ft.
F. L. Thorn et al No. 1 Koeppen, SE SE SW sec. 31-14-24w. Running 5-in. 4,355 ft.

Woodson County

Becker Bros. et al No. 1 Vann, NW SW SE sec. 22-25-14. Rng. 6-in. at 1,100 ft.
Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. Drlg. 1,520 ft.
Seibel No. 1 Kerschner, CNL NE NE sec. 3-26-15. Drlg. 1,489 ft.
Steinle No. 1 Kash, SE SE sec. 4-26-15. Drlg. 1,570 ft.
Frank Scott No. 1-A Kunts, SE NE SE sec. 21-4n-11w. T.D. 2,800 ft.; abd.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. T.D. 887 ft.; S.D. for csg.
Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. T.D. 950 ft.; S.D.
E. L. Lippert et al No. 1 Miller, NW cor. sec. 4-2n-18w. T. D. 713 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,165 ft.
W. T. Sheldon No. 1 Chapman, C NW NW sec. 26-4s-6e. Drlg. 1,665 ft.

Marshall County

Paul Robb et al No. 1 Vittitoe, C NE SE sec. 11-5s-4e. O.W.D.D.; C.O. to 720 ft.; S.D.

Murray County

Meyer & Greenup No. 1 Arbuckle, NW NW NE sec. 18-2s-3e. Spd. and S.D.
O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. T.D. 2,574 ft.; 1,400 ft. W.I.H. S.D.
Sinclair Prairie Oil Co. No. 1 Lancaster Trust, C SW NE sec. 10-1-2e. Drlg. 4,060 ft.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. Drlg. 5,050 ft.

Stephens County

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. T.D. 8,157 ft.; acd.; flwd. 1,790 B.O. in 16 hrs.; S.I.
Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. Drlg. on 6-in. collar at 1,355 ft.
Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 9,515 ft.
Chas. Newsom No. 1 Pfile, SW cor. sec. 1-2s-7w. Drlg. 1,036 ft.
Ed Parsons No. 1 Blake, C SW NW sec 22-2n-8w. T.D. 4,966 ft.; P. 60 B.O. in 18 hrs.; bailing.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. T.D. 44 ft.; S.D.
Gulf Oil Corp. No. 1 Prichard, SE NW SE sec. 32-3s-16w. T.D. 3,821 ft.; drill pipe stuck. 3,796 ft.
Indian Territory Ill. Oil Co. No. 1 Graham, SE SE NE sec. 1-3s-19w. T.D. 3,081 ft.; est. 500 B.O. dly.
Tom Walker No. 1 Bowman, SW SW NW sec. 10-4s-17w. S.D. 200 ft.

OKLAHOMA

Week Ending September 18

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. T. D. 2,220 ft.; U.R. 6⅝-in. csg. at 2,137 ft.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. T.D. 6,235 ft.; S.D.O.
Indian Terr. Illum. Oil Co. No. 1 Dome-Bo, C NE SE sec. 29-6-10w. Drlg. 3,555 ft.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. T.D. 7,178 ft.; P.B. and drlg. by at 7,110 ft.
Hollenbeck et al No. 1 Ward, SW SE NE sec. 30-7-1e. T.D. 6,949 ft.; D.&A.

Creek County

L. B. Jackson No. 1 Alberty, NE NE NW sec. 25-19-9. T.D. 2,975 ft.; flwd. 200 B. P.D.; tstg.
M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. Burgess 3,005 ft.; T.D. 3,009 ft.; S.D.

Garvin County

Carter Oil Co. No. 1 Potts, C E½ SE NW sec. 36-1n-3w. Drlg. 2,460 ft.
B. C. D. Edwards No. 1 Clark, NE cor. sec. 16-3n-3e. Drlg. 1,785 ft.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 7,485 ft.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. T.D. 5,410 ft.; F. 527 B.O. and 229 B.W. in 24 hrs.; testing for water source.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Wilcox 6,882 ft.; drlg. 6,886 ft.

Hughes County

W. O. Allen No. 1 Barnard, SW cor. sec. 24-8-8. T.D. 4,274 ft.; P.B. 3,423 ft.; est. 3,000,000 ft. gas.
Burke-Greis Oil Co. No. 1 Rhea, SW SW SE sec. 14-10-9. T.D. 1,780 ft.; skidded rig 20 ft.
Carter Oil Co. No. 1 Hamilton, C W½ NE SW sec. 33-4-9. T.D. 6,172 ft.; P.B. 5,989 ft.; dpnd. to 5,994 ft.; pot. 60 B.O.; comp.
E. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. T.D. 4,025 ft.; fsg.
Moroney & Healey No. 1 Field, C NW SW sec. 11-9-11. T.D. 3,540 ft.; H.F.W. D.&A.
Phillips Pet. Co. No. 1 Becker, NE NW SW sec. 8-5-10. Drlg. 2,260 ft.
Texas Co. No. 1 Cox, NE NW NW sec. 23-9-8. T.D. 4,397 ft.; P.B. 4,064 ft.; D.&A.

Kay County

E. J. Shaffer et al No. 1 McKee, NE NW sec. 20-28-1w. Spd. and S.D.

Kiowa County

Hughes & Reese No. 1 Fultz, SE cor. sec. 10-6-18w. T.D. 810 ft.; S.I.
Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. T.D. 1,050 ft.; S.D.
H. L. Wirick et al No. 1 Noske, SE SE NW sec. 1-6n-17w. Drlg. 840 ft.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 6,515 ft. in Atoka: P.B. 3,820 ft.; perf. 2,720-2,970 ft.; S.D.

Lincoln County

Ardie Oil Co. No. 1 State, NE NE SE sec. 16-14-4. Drlg. 4,214 ft.
Continental Oil Co. et al No. 1 Community, NW NW SE sec. 7-15-5. Drlg. 3,410

Logan County

Sunray Oil Co. and Olson Drlg. Co. No. 1 Canning, SW SW NE sec. 31-17-1w. Drlg. 4,650 ft.

Noble County

Darby Pet. Corp. No. 1 McCoy, SE SE SW sec. 24-23-2w. Drlg. 1,340 ft.
Seaboard Western Oil Co. et al No. 1 Guthrie, NW NW NE sec. 6-20-2w. Drlg. 4,992 ft.

Okfuskee County

F. W. Merrick No. 1 Mackey, NE NE SW sec. 29-11-10. Drlg. 3,150 ft.
Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Set 6-in. 2,788 ft.; T.D. 2,840 ft.

Oklahoma County

Frank Buttram et al No. 1 Cole, NW cor. sec. 16-14-1e. 2nd Wilcox 5,851-70 ft.; T.D.; D.&A.

Pawnee County

J. F. McManmon et al No. 1 School Land, NW NW NE sec. 16-21-5. Drlg. 1,020 ft.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 5,165 ft.; C.O.
Phillips Pet. Co. No. 1 Gilcrease, NW NW SE sec. 16-7-12. Drlg. 2,435 ft.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. T.D. 4,347 ft.; S.D.
Kerlyn Oil Co. No. 1 Pratt, SW SE NE sec. 6-4-4e. Wilcox 2,290-2,355 ft.; T.D.; rng. Schlumberger.
Norbia Oil Co. No. 1 McBride, NE NE SW sec. 10-2n-5e. Loc.
Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.
Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. T.D. 3,320 ft.; drill pipe stuck. S.D.

Pottawatomie County

Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Dol. 4,853-86 ft.; shot; flwd. 70 B.O. in 6 hrs.: S.I. for connection.
Roy S. Nash et al No. 1 Miller, C N½ NE SE sec. 29-6-3e. T.D. 4,415 ft.; bailed 8 B.O. and 17 B.W. in 24 hrs.

Seminole County

E. W. Jones et al No. 1 Belford, NE SE NE sec. 9-9-8. Drlg. 4,597 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Salina, SE NE NW sec. 4-5-6. T.D. 3,317 ft.; P.B. 3,272 ft.; recementing.

Texas County

Hagey et al No. 1 Becker, C NE sec. 4-1n-13ecm. Spd.
Hagey et al No. 1 Peck, C NE sec. 6-1n-13ecm. Rig.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. T.D. 4,260 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

A. L. Larson No. 1 Mason, SW SE SE sec. 35-1n-14. Drlg. 180 ft.
C. M. Sheldon and Gardner Pet. Co. No. 1 Lee, NE NW SW sec. 2-4s-10e. Drlg. 550 ft.

Coal County

Carter Oil Co. No. 1 Claytor, C W½ NE SW sec. 27-2n-9e. Drlg. 5,790 ft.
Phillips Pet. Co. No. 1 Beck, SE SW SW sec. 6-1n-9e. Drlg. 3,204 ft.

Comanche County

M. J. Andrichak No. 1 Korthouse, NW NE SW sec. 35-2n-10w. T.D. 1,095 ft.; 2,000,000 ft. gas; S.I.

ARKANSAS

Columbia County

Standard of La. No. 1 J. P. McKean, SW sec. 8-16s-22w. Drlg. 6,155 ft.
Tide Water-Seaboard Oil Co. No. 1 Crumpler, SW NE SW sec. 24-17-19w. Drlg. 275 ft.

Cross County

Manning & Martin, Inc., No. 1 Park-Greseck, NW NE NE sec. 4-6n-5e. Drlg. 3,122 ft.

Hempstead County

H. D. Easton et al No. 1 R. M. LaGrone, sec. 5-12-26. Cg. 2,868 ft.
Shephard & Todd et al No. 1 Smith, NW SW NE sec. 11-11-25. S.D. 2,290 ft.

Miller County—Rodessa

Anding & Bird No. 4 Skipper, SW NW SW sec. 11-20-28. R.U.
F. W. Burford No. 1 A. J. Cross, E½ SE NE sec. 11-20-28. R.U.
F. W. Burford No. 1 Ahern, S½ NE SW sec. 10-20-28. Drlg. 5,219 ft.
F. W. Burford No. 1 August, S½ SE SW sec. 8-20-27. Drlg. 5,180 ft.
F. W. Burford No. 2 A. A. Capps, sec. 14-20-28. Drlg. 4,825 ft.
F. W. Burford No. 1-B A. A. Capps, NE SE SE sec. 11-20-28. Drlg. 6,089 ft.
F. W. Burford No. 3 Easton, sec. 11-20-28. T.D. 6,075 ft.; tstg.
F. W. Burford No. 1 Gardner-Means, SW NW sec. 11-20-27. Drlg. 4,950 ft.
F. W. Burford No. 1-B G. G. Gerald, NE S½ sec. 15-20-28. Drlg. 5,986 ft.
H. L. Hunt No. 1 Womack, SE sec. 10-20-28. Drlg. 5,423 ft.
H. L. Hunt No. 2 Womack, NE SW SE sec. 10-20-28. Drlg. 4,088 ft.
H. L. Hunt No. 3 Womack, NW SW SE sec. 10-20-28. Drlg. 275 ft.
Kroll & Travis No. 1 Dickson, SW SE NW sec. 11-20-28. R.U.
Roger Lacey No. 1 Grogan, SE cor. sec. 15-20-28. Drlg. 4,923 ft.
Wm. M. Layton No. 4 Terry, SW cor. sec. 14-20-28. Drlg. 4,970 ft.
R. H. Long No. 1 Greer, SW NE SE sec. 10-20-28. Drlg. 275 ft.
McClanahan et al No. 1 J. P. Greer, SE SW NW sec. 11-20-28. R.U.
McClanahan et al No. 3 Capps, sec. 11-20-28. Drlg. 3,150 ft.
McClanahan et al No. 4 Capps, NE NE SW sec. 11-20-28. Drlg. 754 ft.
McClanahan et al No. 5 Capps, NW SW SW sec. 11-20-28. Drlg. 1,634 ft.
McClanahan et al No. 1-B Capps, N½ SW SW sec. 12-20-28. Drlg. 3,038 ft.
J. R. Ostrom No. 1 J. O. Gerrald, NW E¼ sec. 15-20-28. Drlg. 2,155 ft.
Roberts Bros. Drlg. Co. No. 2 W. A. Capps, SW NW SE sec. 16-20-28. Drlg. 3,155 ft.
Roberts Bros. Drlg. Co. No. 3 W. A. Capps, SE SW NE sec. 16-20-28. Drlg. 2,767 ft.
Texas Canadian Oil Co. No. 1 Dickson, SE NW sec. 11-20-28. Drlg. 150 ft.

Pulaski County

A. L. Kitselman No. 2 A. L. Kitselman, Jr., SE SE SW sec. 2-1s-13e. Drlg. 1,200 ft.

Union County—Schuler

E. M. Jones et al No. 1 Marine Oil Co. fee, NW SW SE sec. 17-18-17. Prep. test; T.D. 7,615 ft.
Lion Oil Ref. Co. No. 1-A Edna Morgan, O.W.D.D.; fsg. for D.S.; T.D. 6,183 ft.
W. D. Wingfield et al No. 1 Sou. Kraft Corp., SW NE sec. 18-19-14. Cg. and rmg.; T.D. 5,292 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

F. W. Burford No. 1 Pitts, NW sec. 1-23-16. Drlg. 4,993 ft.
Gulf Ref. Co. No. 2 Campbell, C sec. 4-23-16. Drlg. 2,465 ft.
Holcomb & Thomasson No. 1 Smith, SE sec. 4-23-16. 7-in. cmt. 5,959 ft.; T.D. 6,018 ft.
Magnolia Pet. Co. No. 1 G. W. Hardy, sec. 1-23-16. Drlg. 3,920 ft.
R. W. Norton No. 7 Starke, NW sec. 17-23-16. Drlg. 1,231 ft.
R. W. Norton No. 8 Starke, NW sec. 17-23-16. Drlg. 5,541 ft.
R. W. Norton No. 9 Starke, NW sec. 17-23-16. Drlg. 5,900 ft.
R. W. Norton No. 10 Starke, NW sec. 17-23-16. Drlg. 4,074 ft.
R. W. Norton No. 12 Starke, NW sec. 17-23-16. 6-in. 5,925 ft.; T.D. 5,983 ft.
R. W. Norton No. 14 Starke, C sec. 16-23-16. Comp.; flw. 330 B.P.H.; T.D. 5,910 ft.
Standard Oil of La. No. 1-C Parker, NE NE NW sec. 9-23-16. Drlg. 5,225 ft.
United Gas No. 5 Starke, SE sec. 8-23-16. 7-in. 5,912 ft.; T.D. 6,000 ft.

N. LOUISIANA WILDCATS

Bienville Parish

H. L. Hunt and Seaboard Oil Co. No. 1 Commercial Real Estate Corp., NE NW sec. 3-16-6. Arg. set 7-in.; T.D. 6,801 ft.

Bossier Parish

Ark.-La. Gas Co. No. 4 R. O. Roy, sec. 18-17-11. Drlg. 2,225 ft.
L. W. Dennis No. 1 D. T. Roos, SW NW NW sec. 13-19-12. Drlg. 350 ft.
Triangle Drlg. Co. No. 1-A Schuler Est., SE NW sec. 13-17-12. Drlg. 2,185 ft.

Caddo Parish

W. D. Ambrose No. 3-B Pender, NW SW sec. 11-20-15. Drlg. 1,050 ft.
C. L. Ferguson et al No. 1 Cooney, sec. 35-21-16. Comp.; pmp. 5 B.P.D.; T.D. 2,265 ft.
La. Oil Prod. Co. No. 11-B Muslow, sec. 4-20-15. Drlg. 125 ft.
La. Oil Prod. Co. No. 12-B Muslow, sec. 4-20-15. R.U.
Magnolia Pet. Co. No. 25 Robertshaw, sec. 23-21-15. Pmp. 114 B.P.D.; T.D. 1,665 ft.; comp.
Orr et al No. 1 Acme fee, C sec. 15-21-16. Drlg. 1,839 ft.
G. W. Montgomery No. 1 Caddo Lvy. Bd., SE SW sec. 11-19-15. S.D. 1,200 ft.
L. J. Davis No. 1 Stiles, SE sec. 17-21-16. 8-in. 1,007 ft.; W.O.S.R.
W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. P.B. and tstg.; T.D. 5,413 ft.; S.G.; perf. 5,100-20 ft.; tstg.
La. Oil Prod. Co. No. 10-B Muslow, SW SE SW sec. 4-20-15. T.D. 2,172 ft.; W. O.S.R.
Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Cg. 8,954 ft.
Surf-Maji Oil Co. No. 3 Self, SE sec. 10-20-15. Drlg. 500 ft.

Claiborne Parish

Atlantic Ref. Co. No. 4 F. B. King, W½ SE SE sec. 35-21-5. 5-in. 5,211 ft.; T.D. 5,223 ft.
Atlantic Ref. Co. No. 1-A Tatum, N½ NE SE sec. 31-21-4. Comp.; flw. 28 B.P.H.; T.D. 5,212 ft.
Atlantic Ref. Co. No. 1-B Tatum, W½ NW SW sec. 32-21-4. Comp.; flw. 290 B.P.D.; T.D. 5,210 ft.
R. L. Bauman No. 1 C. S. L. Patton, NW SW NW sec. 1-20-5. Drlg. 100 ft.
R. L. Bauman No. 2 M. S. Patton, N½ NW NE sec. 1-20-5. Comp.; flw. 42 B. P.H.; T.D. 5,304 ft.
Gulf Rfg. Co. No. 2 S. E. Tatum, S½ SW SW sec. 32-21-4. Drlg. 5,065 ft.
Harry Hanbury No. 2-B R. Vaughn, N½ SW SE sec. 25-21-5. Drlg. 4,245 ft.
Harry Hanbury No. 2-C R. Vaughn, N½ SE SE sec. 25-21-5. Drlg. 4,220 ft.
Hollifield & McFarland No. 4 M. S. Patton,

E½ SW SE sec. 31-21-4. Comp.; flw. 17 B.P.H.; T.D. 5,311 ft.
Hollifield & McFarland No. 1 W. H. Patton, E½ NE NE sec. 2-20-5. Fsg.; T.D. 4,981 ft.
Hollifield & McFarland No. 2 H. W. Patton, W½ NE NE sec. 2-20-5. R.U.
T. L. James No. 1 Baker, sec. 25-21-5. T.D. 5,222 ft.; C.O.; 1,100 ft. O.I.H.
T. L. James No. 1 D. E. Fowler, W½ NE SW sec. 32-21-4. Drlg. 5,122 ft.
Lyons & Neely No. 1 Simms, NE NE sec. 32-20-5. Drlg. 1,000 ft.
Magnolia Pet. Co. No. 6 English, S½ NE NW sec. 31-21-4. Comp.; flw. 45 B.P.H.; T.D. 5,220 ft.
Magnolia Pet. Co. No. 1 Fowler, W½ SE SW sec. 32-21-4. Drlg. 4,690 ft.
Magnolia Pet. Co. No. 4 H. E. Patton, S½ SE SW sec. 36-21-5. 7-in. 5,270 ft.; T.D. 5,281 ft.
W. L. McClanahan No. 1 J. T. Lewis, W½ SW SE sec. 25-20-7. R.U.
Olson Drlg. Co. No. 2 J. T. Bean, N½ NW NW sec. 33-21-4. Drlg. 4,691 ft.
A. O. Olson No. 2-B T. F. Patton, N½ SE SW sec. 29-21-4. Drlg. 2,304 ft.
C. R. Schuster No. 3 Patton Est., N½ NE NE sec. 1-20-5. Drlg. 3,980 ft.
Scouts Oil Co. No. 1 E. C. English, S½ SW SE sec. 30-21-4. Comp.; flw. 21 B. P.H.; T.D. 5,215 ft.
Scouts Oil Corp. No. 1 Bean, E½ NE NW sec. 32-21-4. Drlg. 3,980 ft.
Sells Pet. Co. No. 2 J. Bean, Jr., E½ SW NW sec. 32-21-4. Comp.; flw. 65 B.P.H.; T.D. 5,174 ft.
Sells Pet. Co. No. 2 W. Jones, E½ SE SE sec. 31-21-4. Comp.; flw. 17 B.P.H.; T.D. 5,320 ft.
Sloan & Zook Co. No. 1 Patton Est., W½ NE NW sec. 1-20-5. Drlg. 5,260 ft.
Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. T.D. 5,438 ft.; W.O.S.R.
Standard Oil of La. No. 4 F. B. King, sec. 35-21-5. Drlg. 5,344 ft.
United Gas et al No. 1 J. W. Stevenson, SE SW SE sec. 6-19-5. Drlg. 5,445 ft.
G. H. Vaughn et al No. 1 Eppinger, SW sec. 20-21-4. Drlg. 824 ft.

Concordia Parish

Coastal Mineral & Dev. Co. No. 1 Winsten, sec. 23-7-9e. Drlg. 2,165 ft.
Edward A. Addy et al No. 1 Posternack, NW SW sec. 49-8n-93. S.D. 50 ft.

De Soto Parish

Clear Lake Oil Co. No. 1 J. A. Woolums, NW sec. 29-12-12. S.D. 2,000 ft.
Pullman Oil Co. No. 4 Ramsey, NE SW NW sec. 36-11-11. T.D. 2,934 ft.; tstg. S.W.; S.D.

Franklin Parish

Tensas Delta Oil Corp. No. 1 Woodland, NE sec. 22-11-9. T.D. 6,500 ft.; rng. Schlumberger.

LaSalle Parish

Buck Granshaff et al No. 1 Russell, sec. 25-10-1e. Drlg. 800 ft.

Lincoln Parish

J. E. Burford, Sr., No. 1 Hanna, SE SW SE sec. 34-18-4w. Drlg. 6,300 ft.
Crown Cen. Pet. Co. No. 2 T. F. Patton, S½ SE NW sec. 6-20-4. Comp.; flw. 28 B.P.H.; T.D. 5,297 ft.
Gigantic Oil Co. No. 1 R. L. Sanderson, NW SE NW sec. 30-18-1w. T.D. 50 ft.; S.D.
T. L. James No. 1 J. J. Spence, SW NE sec. 11-17-4. T.D. 6,619 ft.; S.G.; rmg.
W. F. Lacey No. 2 T. F. Patton, E½ NW NE sec. 6-20-4. Comp.; flw. 78 B.P.H.; T.D. 5,351 ft.
Ludel Oil Corp. No. 1 Gill, NE NE NW sec. 36-20-2w. Drlg. 4,534 ft.
Lyons & Neely No. 1 H. E. Patton, N½ NE SW sec. 6-20-4. 5-in. 5,334 ft.; T.D 5,367 ft.
Lyons & Neely No. 2 H. W. Patton, S½ SW NW sec. 6-20-4. Drlg. 3,500 ft.
Magnolia Pet. Co. No. 1 F. Corbin, W½ NE NE sec. 6-20-4. Drlg. 4,788 ft.
E. H. Moore, Inc. No. 1 Arcadia Comm. Bank, C NW sec. 22-18-5. S.D. 800 ft.
Olsen Drlg. Co. No. 1 Aycock, N½ SW SW sec. 6-20-4. Comp.; flw. 185 B.P.D.; T.D. 5,370 ft.
Red Iron Drlg. Co. No. 1 T. F. Patton, NW SW NE sec. 6-20-4. R.U.

Red River Parish

Gulf Ref. Co. No. 28 L. E. Kennedy, NW sec. 25-13-11. Cg. 2,488 ft.
Gulf Ref. Co. No. 42 E. T. Robinson, NW sec. 25-13-11. Drlg. 2,486 ft.
W. J. Hunter No. 2 Long Bell Lbr. Co., SW NW sec. 20-19-9. Drlg. 3,985 ft.
Jones et al No. 1 Morston, SW SE sec. 14-13-11. Drlg. 907 ft.
J. C. Prine No. 1 Haynes, SW sec. 20-13-10. Hole clean; cmtd. 4-in. 2,502 ft.; T.D. 5,220 ft.; W.O.C.S.
T. S. Shaw No. 5 Wilkinson, NW SE SE sec. 4-12-10. Drlg. 2,400 ft.
W. K. Williams No. 2 Padock, SE SW NW sec. 33-13-11. Cg. 2,500 ft.

Webster Parish

V. L. Foster No. 2 J. M. Mixon, SE sec. 21-21-10. Drlg. 3,150 ft.
Magnolia Pet. Co. No. 4 Aarnes-Cox, NW sec. 22-21-10. Drlg. 5,885 ft.
Ohio Oil Co. No. 47 Bodcaw Acct. 2, SW SE sec. 15-21-10. Drlg. 7,636 ft.
Ohio No. 1 S. P. D. Covle and W. Cox SW SW SE sec. 23-21-10. Drlg. 6,381 ft.
Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drlg. 7,785 ft.
Ohio No. 7-B R. L. Holloway, 586 ft. N. 756 ft. E line, sec. 23-21-10. Drlg. 7,421 ft.
A. G. Oliphant et al No. 1 Banks, NE NE sec. 34-21-10. Drlg. 7,218 ft.
Ohio Oil Co. No. 1 D. W. Merritt, SW cor. sec. 14-21-10. Drlg. 6,258 ft.
Standard Oil Co. of La. No. 7 Mrs. M. F. Davis, NE NE NW sec. 23-21-10. Drlg. 5,664 ft.
Standard Oil Co. of La. No. 2-B Mrs. M. E. Gray, NE NE NW sec. 26-21-10. Drlg. 5,611 ft.
United Gas No. 6 Tillman, NE sec. 28-21-10. R.U.
Woodley Pet. Co. No. 2-B L. C. Cox. Drlg. 6,994 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. Drlg. sdy. sh. 11,738 ft.

Anse La Butte—St. Martin Parish

Crusader Pet. Co. No. 3-B Begnaud. Cg. 3,150 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc et al No. 1 Wurzlow, sec. 17-22s-18e. T.D. 10¾-in. csg. 1,008 ft.; bailed S.W.; tried to blow out; hole bridged; R.U. to pmp.
F. J. LeBlanc No. 2 Wurzlow, sec. 17-22s-18e. Drlg. sh. 2,212 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 4 Wilbert, sec. 74-9s-10w. T.D. 4,106 ft.; P.B. sdtrkd.; drlg. sh. 3,580 ft.

Bayou Cocotris—Terrebonne Parish

Shell Pet. Corp. No. 2 Pelican, sec. 19-17s-15e. Drlg. sd. 5,079 ft.
Shell Pet. Corp. No. 3 Pelican, sec. 19-17s-15e. Drlg. sh. 3,743 ft.

Bayou De Allemands—St. Charles Parish

Amerada Pet. Corp. No. 1 St. Charles Ld. Co., sec. 38-15s-20e. R.U.

Big Lake—Cameron Parish

Union Sulphur Co. No. 1 P. J. Hebert, sec. 18-12s-8w. 6⅝-in. csg. 8,441 ft.; drlg. sh. 8,644 ft.
Union Sulphur Co. No. 2 J. O. Hebert, sec. 18-12s-8w. R.U.

Black Bayou—Calcasieu Parish

Shell Pet. Corp. No. 38 Watkins. T.D. 5,140 ft.; I.P. 23 B.P.H.; ¼-in. ck.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 19 Sch. Ld., sec. 16-14s-13w. Drlg. sh. 2,730 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 1 Landry, sec. 25-13s-9e. Drlg. sd.&sh. 8,799 ft.
Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drlg. L. 9,360 ft.
Pan American Prod. Co. No. 1 Veeder, sec. 30-13s-10e. T.D. 9,462 ft.; P.B. 2,615 ft.; 7-in. csg. 2,615 ft.; perf. csg. 2,589-91 ft.; showed oil; cmtd. leak in csg.
Pan American Prod. Co. No. 1 Veeder-Hunt, sec. 30-13s-10e. T.D. 7,327 ft.; 7-in. csg. 3,989 ft.; perf. csg. 3,940-50 ft.; I.P. 10 B.P.H.; ¼-in. ck.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52-9s-11e. T.D. 5,303 ft. in salt; D.S. stck. P.B. 5,202 ft.; W.O.C.
Standard Oil Co. No. 7 Gay, sec. 52-9s-11e. Cmtd. 13⅜-in. csg. 956 ft.; T.D. 4,370 ft.; fsg.

Darrow—Ascension Parish

Humble O. & R. Co. No. 16 Community, sec. 29-10s-2e. Drlg.
Humble O. & R. Co. No. 11 Gumble, sec. 35-10s-2e. Drlg. sdy. sh. 7,842 ft.
Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 18 State, sec. 5-22s-16e. T.D. 7,705 ft.; redrlg. hole 7,482 ft.

Edgerly—Calcasieu Parish

Crusader Pet., Inc., No. 1 Miller Bros., sec. 27-9s-11w. T.D. 6,082 ft.; oil sd.; 7-in. csg. 6,078 ft.; swbg.; flwd. oil and wash wtr.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. T.D. 6,946 ft.; D.S. stuck; fsg.

Garden Island—Plaquemines Parish

Texas Co. No. 24 State, sec. 37-23s-33e. Drlg. sh. 1,342 ft.

Gillis—Calcasieu Parish

Union Sulphur Co. No. 3 Bel, sec. 2-9s-8w. Core sd. 7,716 ft.
Union Sulphur Co. No. 8 Castle, sec. 13-9s-8w. T.D. 7,153 ft.; 5-in. csg. 7,153 ft.; flwd. oil and S.W.; set retainer; perf. csg. 5,180-82 ft.; cutting and pulling screen; tstd. gas; killed to reperf.
Union Sulphur Co. No. 7 Kaufman, sec. 13-9s-8w. T.D. 6,691 ft.; sdtrkd.; drlg. sh. 6,571 ft.

Hackberry—Cameron Parish

W. T. Burton No. 3 Lewis, sec. 22-12s-10w. R.U.
W. T. Burton No. 4 Vincent, sec. 22-12s-10w. T.D. 3,722 ft.; P.B.; drlg. sd.&sh. 4,600 ft.
W. T. Burton No. 1 Porter Ellender, sec. 27-12s-10w. Core oil sd. 4,976-81 ft.
M. P. O'Meara No. 1 Rigmaden heirs, sec. 22-12s-10w. Drk.
Stanolind O. & G. Co. No. 6 Duhon, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. T.D. 6,233 ft.; 7-in. csg. 5,815 ft.; sdtrkg. 5,309 ft.; T.D. 5,778 ft.; run screen.
Stanolind O. & G. Co. No. 8 Carter & Sweeney, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 9 Carter & Sweeney, sec. 22-12s-10w. T.D. 5,429 ft.; P.B. 3,319 ft.; 7-in. csg. 3,308 ft.; abd.
Stanolind O. & G. Co. No. 10 Carter & Sweeney, sec. 22-12s-10w. Drk.
Stanolind O. & G. Co. No. 11 Carter & Sweeney, sec. 22-12s-10w. 10¾-in. csg. 1,451 ft.
Stanolind O. & G. Co. No. 53 State, sec. 22-12s-10w. 10¾-in. csg. 1,930 ft.; T.D. 6,648 ft.; P.B. 4,080 ft.
Sutton-Burton Oil Co. No. 3-A Doiron, sec. 22-12s-10w. T.D. 4,948 ft.; 7-in. csg. 4,928 ft.; comp.; no gauge.
Texas Co. No. 23-B State, sec. 12-12s-9w. T.D. 5,448 ft.; P.B. 2,409 ft.; drlg. sh. 7,023 ft.
Union Sulphur Co. No. 9 Doiron, sec. 3-12s-10w. 5-in. csg. 6,176 ft.; P.B. 5,510 ft.; perf. csg. 5,485-5,510 ft.; swbd. S.W.

Lockport-Cameron Parish

Magnolia Pet. Co. No. 35 Miller, sec. 9-10s-9w. Drlg. sh. 2,117 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. Set 7-in. csg. 9,768 ft.; cd. oil sd. 10,194-10,215 ft.; cg. ahead.
Herton Oil Co. No. 5 Roans, sec. 40-13s-9e. Core sh. 7,725 ft.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. T.D. 7,107 ft.; rmg.
W. T. Burton No. 3 J. J. Roboria, sec. 41-9s-2w. Core sdy. sh. 7,118 ft.
Cosmo Pet. Co. No. 1 M. E. Crusel, sec. 42-9s-2w. T.D. 7,069 ft.; W.O.C.
Glassell No. 1 Bourgeaux, sec. 41-9s-2w. T.D. 6,664 ft.; 7-in. on bttm.
Glassell & Glassell No. 3 McFarlain, sec. 41-9s-3w. Drlg. sh. 6,934 ft.
Louisiana Crusader Oil Co. No. 1 Lake Oil fee, sec. 45-9s-2w. T.A. 5,017 ft.; salt; P.B. 1,665 ft.; sdtrkg.
M. P. O'Meara No. 1 McFarlain, sec. 41-9s-2w. T.D. 6,910 ft.; 7-in. csg. 6,815 ft.; tstg.
M. P. O'Meara No. 1 Moresi, sec. 41-9s-2w. Drk.
Reiter Foster Oil Co. No. 2 Crusel, sec. 42-9s-2w. R.U.
S. Rhodes No. 2 Iowa-Jennings, sec. 45-9s-2w. Drlg. sh. 1,830 ft.
Superior Oil Co. No. 7 Leckelt, sec. 42-9s-2w. R.U.
Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. Drlg. sh. 6,887 ft.
Superior Oil Co. No. 4 Jennings-Haywood, sec. 41-9s-2w. Drlg. sh. 4,312 ft.
Superior Oil Co. No. 2 Moresi, sec. 41-9s-2w. Drlg. sd. 7,036 ft.
Superior Oil Co. No. 3 Moresi, sec. 41-9s-2w. Drlg. sh. 6,510 ft.

Lafitte—Jefferson Parish

Texas Co. No. 7 L.L.E., sec. 20-17s-24w. Drlg. 1,234 ft.
Texas Co. No. 2 Milling, sec. 20-17s-24e. Drlg. sdy. sh. 9,251 ft.
Texas Co. No. 1 State-Bayou Norm, sec. 28-17s-24e. Drlg. sh.&L. 11,373 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 141 State, sec. 40-21s-19e. Drlg. sh. 3,163 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 1-18s-25e. Drlg. S.W. sd. 7,796 ft.

Lake Washington—Plaquemines Parish

Humble O. & R. Co. No. 25 Cockrell, sec. 35-20s-26e. Drlg. sdy. sh. 3,574 ft.

Leesville—Lafourche Parish

Texas Co. No. 66 Leesville, sec. 26-21s-22e. T.D. 3,878 ft.; P.B. 3,510 ft.; perf. csg. 3,557-67 ft.; I.P. 64 B.P.D.; ¼-in. ck.

Lockport—Calcasieu Parish

Magnolia Pet. Co. No. 35 Miller, sec. 9-10s-9w. Drlg. L. 2,327 ft.

Long Lake—Lafourche Parish

Fohs Oil Co. No. 2 State, sec. 65-17s-19e. R.U.
Fohs Oil Co. No. 3 State, sec. 65-17s-19e. 10¾-in. csg. 2,743 ft.; drlg. sh. 6,708 ft.

New Iberia—Iberia Parish

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. T.D. 5,019 ft.; P.B. and sdtrkd.; salt 5,509 ft.; P.B. 2,650 ft.; W.O.C.
Texas Co. No. 3 Bryant, sec. 25-12s-7e. R.U.
Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. T.D. 5,126 ft.; P.B. sdtrkd.; drlg. L. 4,447 ft.
Wm. Hellis No. 10 Bernard, sec. 54-12s-7e. R.U.
Wm. Hellis No. 11 Bernard, sec. 54-12s-7e. R.U.
Wm. Hellis No. 6 Bullock-Burke, sec. 25-12s-7e. T.D. 4,817 ft.; P.B. and sdtrkd.; drlg. sh. 3,621 ft.
Texas Co. No. 3 Coleste, sec. 25-12s-7e. T.D. 5,132 ft.; P.B.; drlg. sd. 4,740 ft.
Texas Co. No. 7-B Hanzen, sec. 54-12s-7e. Drlg. sh. 4,277 ft.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S Farms Co., sec. 23-10s-4w. T.D. 9,151 ft.; 7-in. csg. on bttm.; perf. csg. 9,136-40 ft.; tstd. dry gas; P.B.; perf. 8,605-10 ft.; made squeeze job; perftg. csg. to test.

Starks—Calcasieu Parish

Capital Oil Co. No. 1 Lutcher-Moore, sec. 24-9s-13w. R.U.
Lutcher Moore No. 2 fee, sec. 19-9s-12w. Drlg. sh. 4,104 ft.
Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. T.D. 4,861 ft.; S.D.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 849 fee, sec. 29-9s-10w. Drlg. broken rock 3,498 ft.
Union Sulphur Co. No. 850 fee, sec. 29-9s-10w. Drlg. sh. 1,872 ft.
Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. T.D. 5,570 ft.; 7-in. csg. 5,570 ft.; comp.; no gauge.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 1-B Smedes, sec. 18-11s-6e. Drlg. sdy. sh. 5,308 ft.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 10 Harang, sec. 7-17s-20e. Drlg. sd. 6,049 ft.
Pan American Prod. Co. No. 11 Harang, sec. 8-17s-20e. Drlg. 1,213 ft.

Venice—Plaquemines Parish

Tide Water Oil Co. No. 4 Manhattan Fruit Co., sec. 26-21s-30e. Spd.

Vinton—Calcasieu Parish

Katina Oil Co. No. 2 Vincent, sec. 34-10s-12w. Drlg. sh. 3,575 ft.
Superior Oil Co. No. 1 Gray, sec. 4-11s-12w. Drlg. sh. 5,309 ft.
Vinton Pet. Co. No. 23 Vincent, sec. 34-10s-12w. R.U.

White Castle—Iberville Parish

T. D. Humphray No. 1 E. B. Adams, sec. 1-11s-12e. Spudded 70 ft.
Shell Pet. Corp. No. 5 Shingle, sec. 12-11s-12e. R.U.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Drlg. sh. 4,116 ft.
Humble O. & R. Co. No. 1 Floyd Williams, sec. 34-8s-1e. T.D. 9,339 ft.; P.B. 8,750 ft. perf. csg. 8,730-40 ft.; tstd. S.W.; P.B. 8,406 ft.; tstd. S.W.; P.B.; perf. csg. 8,230-36 ft.; tstg.
Humble O. & R. Co. No. 1 R. A. Sarver, sec. 35-10s-1e. Drlg. sh. 5,520 ft.
Magnolia Pet. Co. No. 1 Duson, sec. 14-8s-2w. R.U.
T. S. Markley No. 1 Daigle, sec. 19-7s-2e. Drlg. sh. 4,116 ft.

Calcasieu Parish

D. & D. Oil Co. No. 2 Lutcher-Moore, sec. 1-8s-13w. T.D. 8,340 ft.; run 9⅝-in. csg.

Cameron Parish

Humble O. & R. Co. No. 1 Miami Corp., sec. 8-14s-5w. 20-in. pipe set 188 ft.
Pure Oil Co. No. 2 State, sec. 14-13s-3w. Drlg. sdy. L. 8,105 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w M.I.R.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. T.D. 6,127 ft.; D.S. stuck.

Evangeline Parish

Continental Oil Co. No. 1 Tate, sec. 44-3s-2e. T.D. 9,098 ft.; sd. and sh. showing oil cored 8,970-9,030 ft.; 7-in. csg. 9,098 ft.; perf. csg. 9,015-35 ft.; flwd. 36-grav. oil, then went dead; pulling tbg. to reperf.
Schlicher Prod. Co. No. 1 Denois Ld. & St. Stone Co., sec. 35-3s-1w. 13⅜-in. csg. 720 ft.; T.D. 2,306 ft.; fsg.

Iberia Parish

Texas Co. No. 2-B Vermilion Bay, sec. 20-16s-5e. Drlg. sdy. L. 3,465 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. S.D. 3,501 ft.

Lafourche Parish

Amerada Pet. Corp. No. 1 South Coast Corp., sec. 34-15s-19e. Drlg. sh. 6,137 ft.
Gulf Oil Corp. No. 3 State P.P., sec. 36-23s-21e. Recvd. 1,000 ft. of oil on 6-min. D.S.T. at 6,749-6,846 ft.; 9⅝-in. csg. 6,832 ft.; drlg. 7,121 ft.; rec. 2,000 ft. P.L.O. on D.S.T. 6,958-70 ft.; T.D. 7,269 ft.; P.B. 6,971 ft.; W.O.C.
Wm. Helis No. 2 City of New Orleans, sec. 19-23s-23e. Drk.

Livingston Parish

Grubb et al No. 1 Evans, sec. 47-7s-2e. T.D. 7,656 ft.; D.S. stuck; abd.

Plaquemines Parish

Gulf Oil Corp. No. 3 State (Jackson dist). Drlg. sh. 5,007 ft.
Humble O. & R. Co. No. 6 Orleans Levee Bd., sec. 10-18s-15e. R.U.
Humble O. & R. Co. No. 10 Orleans Levee Bd., sec. 10-18s-15e. T.D. 947 ft.; abd.

St. Bernard Parish

Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; S.D. 3,440 ft.

St. Martin Parish

Texas Co. No. 10 St. Martin, sec. 15-8s-7e. T.D. 5,360 ft.; fsg.

St. Mary Parish

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. 7⅝-in. csg. 10,515 ft.; core sd.&sh. 10,940 ft.

Terrebonne Parish

Barnsdall Oil Co. No. 1 Dilbert, Stark & Brown Sur., sec. 110-16s-15e. R.U.

Vernon Parish

Castor Creek Drlg. Co. No. 1 Llano Del Rio, Inc., sec. 34-2n-9w. Drk.

TEXAS

Week Ending September 18

GULF COAST FIELDS

Hastings—Brazoria County

Humble O. & R. Co. No. 1 G. W. Alexander, H.T.&B. Sur. No. 28. T.D. 6,080 ft.; 5½-in. csg. 6,020 ft.; I.P. 614 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 2-D W. F. Beers, Perry and Austin Sur. 9⅝-in. csg. 1,247 ft.

Humble O. & R. Co. No. 8-B Brown, Perry and Austin Sur. Drlg. sh. 5,100 ft.

Humble O. & R. Co. No. 16 Cecil Brown, W. H. Snyder Sur. T.D. 6,118 ft.; 5½-in. csg. 6,114 ft.; I.P. 342 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 7 R. D. Haden, R. Hoppel Sur. Drlg. sh. 5,996 ft.

Humble O. & R. Co. No. 8 R. D. Hacen, Wm. Henry Sur. R.U.

Humble O. & R. Co. No. 1 W. H. McDeed, H.T.&B. Sur. No. 30. Drlg. sh. 4,047 ft.

Humble O. & R. Co. No. 1 W. C. Tullos, H.T.&B. Sur. No. 29. R.U.

Pearland Oil Co. No. 1 C. H. Alexander, H.T.&B. Sur. No. 28. Drlg.

Producers Inv. Co. No. 1 C. H. Alexander, H.T.&B. Sur. No. 28. Drlg.

Stanolind O. & G. Co. No. 4 R. L. Autrey, H.T.&B. Sur. No. 7. R.U.

Stanolind O. & G. Co. No. 3-B W. H. Avitts, H.T.&B. Sur. Drlg.

Stanolind O. & G. Co. No. 7-B C. D. Brown. R.U.

Stanolind O. & G. Co. No. 5 T. C. Edwards, Wm. Henry Sur. T.D. 6,080 ft.; 7-in. csg. 6,078 ft.; perf. 6,037-77 ft.; tstg.

Stanolind O. & G. Co. No. 8 R. O. Furface, B.B.B.&C. Sur. T.D. 1,250 ft.

Stanolind O. & G. Co. No. 6 J. F. Law, H. T.&B. Sur. No. 36. Drlg.

Stanolind O. & G. Co. No. 9 L. D. Shaw, H T.&B. Sur. No. 36. Drlg. sdy. L. 4,667 ft.

Stanolind O. & G. Co. No. 1 Matsushita, H. Stevens Sur. 10¾-in. csg. 1,255 ft.; T.D. 6,080 ft.; 7-in. csg. 6,047 ft.; I.P. 508 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 1 Randall, A.C. H.&B. Sur. No. 2, Lot 29.T.D. 6,080 ft.; 7-in. csg. 6,078 ft.; I.P. 531 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 10 Turner, A. C.H.&B. Sur. No. 1. T.D. 6,080 ft.; 7-in. csg. 6,075 ft.; I.P. 579 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 11 B. I. Turner, A.C.H.&B. Sur. No. 1. Drlg.

Stanolind O. & G. Co. No. 12 Turner, A. C.H.&B. Sur. No. 1. Drlg.

Lockridge—Brazoria County

Gulf Oil Corp. No. 3 Baker, J. W. Hall Sur. Drlg. sh. 5,535 ft.

Gulf Oil Corp. No. 4 Carrie Baker, J. W. Hall Sur. Drlg.

Gulf Oil Corp. No. 1 Great Southern, E. D. Robertson Sur. Drlg. sdy. sh. 5,361 ft.

Kirby Pet. Co. No. 2 Carrie Baker, J. W. Hall Sur. R.U.

Dr. C. M. Lusk No. 1 Ramsey State Farm, J. W. Hall Sur. T.D. 6,369 ft.; 7-in. csg. on bttm.; perf. csg. 6,365-68 ft.; I.P. 216 B.P.D.; ⅛-in. ck.

McCurdy and Johnson No. 1 State, Brazos River. R.U.

Shell Pet. Corp. No. 4 Ramsey, J. W. Hall Sur. Drlg. 1,481 ft.

Manvel—Brazoria County

F. D. Jones et al No. 1-A Bankers Mtg., E. Little Sur., Lot 75. Drlg.

Texas Co. No. 26 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91. Loc.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Larsen, C. Breen Sur. T.D. 10,761 ft.; 7-in. csg. 10,650 ft.

Harrison & Abercrombie No. 1 Smith, C. Breen Sur. 9⅝-in. csg. 7,016 ft.

Sandy Point—Brazoria County

H. J. DeArman No. 1 Edmundson, D. Talley Sur. R.U.

H. J. De Arman No. 2 J. A. Fite, D. Talley Sur. T.D. 6,505 ft.; oil sd.; rng. csg.

West Columbia—Brazoria County

Texas Co. No. 87 Hogg, G. Tennille Lge. R.U.

Texas Co. No. 3 Phillips, G. Tennille Sur. Drlg. sd. 3,828 ft.

Texas Co. No. 1 T. L. Smith, G. Tennille Sur. T.D. 5,588 ft.; 7-in. csg. 5,476 ft.

Calhoun—Heyser—Victoria County

Blanco Oil Co.-Buchanan No. 1 R. B. Morris, A. Sisneros Sur. Drlg. sh. 3,412 ft.

Gulf Oil Corp. No. 1 Schultz, J. E. Galban Sur. Drlg. sh. 2,000 ft.

Gulf Oil Corp. No. 1 T. P. Traylor, J. E. Galban Sur. Drlg. sdy. sh. 5,371 ft.

Humble O. & R. Co. No. 3 Marshall, A. Sisneros Sur. T.D. 5,487 ft.; 5½-in. csg. 5,480 ft.

Humble O. & R. Co.-Plymouth Oil Co. No 18-A P. H. Welder, J. M. Rios Sur. T.D. 5,489 ft.; perf. csg. 5,479-83 ft.; I.P. 265 B.P.D.

Humble O. & R. Co. No. 19-A Welder, J. M. Rios Sur. Drlg. 1,051 ft.

Magnolia Pet. Co. No. 2 O. M. Lander, J. E. Galban Sur. Drlg. sh. 4,075 ft.

Normandie Oil Co. No. 7 J. G. Cook, A. Sisneros Sur. Drlg. sh. 1,610 ft.

Portilla Drlg. Co. No. 9-C P. H. Welder, J. M. Rios Sur. T.D. 5,481 ft.; run csg.

Sinclair Prairie Oil Co. No. 4 W. H. Bennett, A. Sisneros Sur. R.U.

Sinclair Prairie Oil Co. No. 6 Bennett, A. Sisneros Sur. T.D. 5,740 ft.; 7-in. csg. 5,730 ft.; perf. 5,740-47½ ft.; I.P. 96 B.P.D.; 6/64-in. ck.

Sun Oil Co. No. 2 W. N. Coffey, J. Galban Sur. Drlg. sh.&sd. 5,335 ft.

Anahuac—Chambers County

Humble O. & R. Co. No. 11 Broussard, sec. 59, H.&T.C. Sur. T.D. 7,085 ft.; 5½-in. csg. 7,062 ft.

Humble O. & R. Co. No. 14 Johnson, sec. 47, H.&T.C. Sur. T.D. 7,025 ft.; 5½-in. csg. 7,118 ft.

Humble O. & R. Co. No. 28 Middleton, sec. 58, H.&T.C. Sur. T.D. 7,080 ft.; I.P. 627 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 10 Zappe, sec. 51, H.&T.C. Sur. 9⅝-in. csg. 1,023 ft.; T.D. 6,586 ft.; fsg.

Cotton Lake—Chambers County

Joe Ludin et al No. 1 Lawrence, Solomon Barrow Sur. R.U.

Seabreeze—Chambers County

Sun Oil Co. No. 3 Acorn, H.T.&B. Sur. 103. 13⅜-in. csg. 1,393 ft.; T.D. 8,074 ft.; rmg.

Sun Oil Co. No. 1 Jackson, Yarbo Sur. Drlg. wtr. sd. 8,710 ft.

Turtle Bay—Chambers County

Stanolind No. 4-A Middleton, S. Burney Sur. T.D. 6,615 ft.; swbg.

Stanolind O. & G. Co. No. 5 Middleton, M. A. Carroll Sur. 10¾-in. csg. 1,185 ft.; T.D. 6,598 ft.; 7-in. csg. 6,590 ft.

Stanolind O. & G. Co. No. 1 Morrisey, M. A. Carroll Sur. T.D. 6,625 ft.; 7-in. csg. 6,610 ft.; R.U. to pump.

Stanolind O. & G. Co. No. 1 Silva, S. Burney Sur. 10¾-in. csg. 1,188 ft.; T.D. 6,600 ft.; make D.S.T.

Garwood—Colorado County

Coyle-Concord No. 2 Mary South, sec. 41, I.&G.N. Sur. Cmtd. 10¾-in. csg. 628 ft T.D. 6,034 ft.; flwd. est 2 bbls. of fluid per hr., 25% dist., 75% wash wtr.; 3/32-in. ck.; T.P. 2,000 lbs.; C.P. 2,025 lbs.

Orchard—Fort Bend County

Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. Drlg. sh. 5,217 ft.

Gulf Oil Corp. No. 55 J. M. Moore, J. Frazier Sur. R.U.

Dickinson—Galveston County

Atlantic Ref. Co. No. 2 Anderson, W. G Banks Sur. 10¾-in. csg. 1,901 ft.; drlg. sh. 4,612 ft.

Bennett-Kenyon Oil Co. No. 2 B. Schroeder, W. G. Banks Sur. Core sh. 8,013 ft.

Humble O. & R. Co. No. 4-A Maco Stewart, W. K. Wilson Sur. Drlg. sd. 8,383 ft.

Ken-Ben Oil Co. No. 5 Stewart, W. K. Wilson Sur. Core sh. 8,608 ft.

Pure Oil Co. No. 3-B J. W. Shelor, W. G. Banks Sur. 10¾-in. csg. 1,833 ft.; drlg. sh. and shells 5,952 ft.

Stanolind O. & G. Co. No. 3 Damiani, W. K. Wilson Sur. T.D. 8,472 ft.; P.B.; T.D. of sdtrkd. hole 7,093 ft.

Turman Oil Co. No. 3 Stewart, W. K. Wilson Sur. Drlg. sh. 8,690 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 10 B.&O., M. Dunman Sur. 10¾-in. csg. 1,315 ft.; drlg. sh.&L. 4,982 ft.

Stanolind O. & G. Co. No. 63 Cade, M. Dunman Sur. 10¾-in. csg. 1,311 ft.

Stanolind O. & G. Co. No. 1 C. E. Smith M. Dunman Sur. T.D. 6,399 ft.; 7-in. csg. 5,180 ft.; swbg.

Silsbee—Hardin County

Republic-Houston Oil Co. No. 21 Brooks fee, G. W. Brooks Sur. T.D. 6,910 ft.; 7-in. csg. 6,898 ft.; I.P. 409 B.P.D.; ¼-in. ck.

Republic Prod. Co.-Houston Oil Co. No. 22 Brooks, G. W. Brooks Sur. Drlg. sd. and sh.; making D.S.T. 6,910-15 ft.

Republic Prod. Co.-Houston Oil Co. No. 23 Brooks, G. W. Brooks Sur. R.U.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 A. S. Moody, Reels & Trobough Sur. 10¾-in. csg. 2,522 ft.; T.D. 4,600 ft.; 5¾-in. csg. 3,650 ft.; perf. csg. 3,596-3,600 ft.; flwd. gas and wash wtr.; S.I.

Friendswood—Harris County

V. H. Borsodi No. 1 Berlowitz, Blk. 3, T. Choate Sur. S.D. 3,322 ft.

Humble O. & R. Co. No. 1 Gray, T. Choate Sur. Top sd. 5,800 ft.; 5½-in. csg. 5,790 ft.; I.P. 28 bbls. P.L.O. per hr.; ¼-in. ck.

Fairbanks—Harris County

Amerada Pet. Corp. No. 1 F. A. Carpenter, F. Fry Sur. No. 267. Drlg. sh.&L.

Hamill and Smith No. 1 Dopsaluf, W.C. R.R., Blk. 1, sec. 4. Drlg. sh. 5,712 ft.

Humble—Harris County

John Deering No. 1 Wm. Lee, E. Rhule Sur., 5,000-ft. test. Drlg. sh. 4,819 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 2 H. L. Bennett et al, Unit 13, H.T.&B. Sur. No. 6. T.D. 4,068 ft.; 5¾-in. csg. 4,051 ft.; swbg.

Stanolind O. & G. Co. No. 2 H. G. Funk, Callahan and Vince Sur. 9⅝-in. csg. 1,479 ft.; T.D. 4,825 ft.; 5¾-in. csg. 4,797 ft.; swbg.

Tomball—Harris County

Humble O. & R. Co.-Magnolia Pet. Co. No. 3 Scherer, J. M. Hooper Sur. T.D. 5,576 ft.; I.P. 8 B.P.H.; ¼-in. ck.

Humble O. & R. Co.-Magnolia Pet. Co. No. 5-B Hobs. Drlg. sh. 5,609 ft.

Humble O. & R. Co. No. 1 J. M. Walsh, J. Pruitt Sur. Drlg. sh. 957 ft.

Humble O. & R. Co.-Magnolia Pet. Co. No. 1-C Kobs, J. H. Edwards Sur. R.U.

Humble O. & R. Co. No. 1 Thomas, J. Pruitt Sur. T.D. 5,564 ft.; 5½-in. csg. 5,558 ft.; I.P. 524 B.P.D., ¼-in. ck.

Mabee Drlg. Co. No. 3 W. Baker, J. House Sur. T.D. 5,589 ft.; W.O.C.

Texas Co. No. 4 Sam Lewis, J. Pruitt Sur. T.D. 5,552 ft.; P.B. 2,850 ft.; W.O.C.

Edna—Jackson County

Steinberger Pet. Corp. No. 2 Druschell, Rodriguez Sur. 7-in. csg. 4,821 ft.; prep. to perf. and test.

Ganado—Jackson County

Texas Co. No. 1 C. E. Niebuhr, Morris & Cummings Sur. No. 4. T.D. 6,543 ft.; abd.

Amelia—Jefferson County

Humble O. & R. Co. No. 15 Tyrell-Combest, A. Savery Sur. T.D. 6,779 ft.; 5½-in. csg. 6,776 ft.

Humble O. & R. Co. No. 5 Fitzgerald, C. Williams Sur. Loc.

Humble O. & R. Co. No. 11 J. H. Phelan, C. Williams Sur. Drlg.

Humble O. & R. Co. No. 12 Phelan, C. Williams Sur. Drlg.

Glenn H. McCarthy No. 5-A Longe, H. Williams Sur. 10¾-in. csg. 1,120 ft.; T.D. 5,891 ft.; run csg.

Glenn H. McCarthy No. 3-B Longe, H. Williams Sur. Drlg.

Stanolind O. & G. Co. No. 6 McCormick, H. Williams Sur. 10¾-in. 1,176 ft.; drlg. sh. 4,984 ft.

Stanolind O. & G. Co. No. 7 Sargl, H. Williams Sur. T.D. 6,435 ft.; 7-in. csg. 6,016 ft.; perf. csg. 5,980-84 ft.; completing.

Sun Oil Co. No. 2 Galley, A. Houston Sur. T.D. 5,902 ft.; pulling screen.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. T.D. 4,047 ft.; 10¾-in. csg. 4,040 ft.; T.D. 4,181 ft.; S.D.

Stanolind O. & G. Co. No. 4-A Pinkie T.&N.O. Sur. T.D. 5,080 ft.; P.B. 4,450 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 1 Junker-Spencer, W. H. Smith Sur. Drlg. sd.&sh. 4,439 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur 18⅝-in. csg. 109 ft.; 9⅝-in. csg. 8,538 ft.; 7-in. csg. 9,951 ft.; T.D. 10,052 ft.; rmg.

Nome—Jefferson County

Sun Oil Co. No. 5 Long, J. Blair Sur. T.D. 6,045 ft.; tstg.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 2 Phelan, S. Stevens Sur. Cg. sd.; good odor of oil 8,687 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 1 Neville, J. Pleasants Sur. Drlg. sh. 3,741 ft.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. Drlg. sh. 6,837 ft.

Hardin—Liberty County

Jack Frazier No. 1-A Lynott & Buffam, J. Robeson Sur. 10¾-in. csg. 1,078 ft.; drlg. sh. 7,713 ft.

Shell Pet. Corp. No. 1 Cochran, H. B. Johnson Sur. Drlg. sdy. sh. 2,114 ft.

Strake Pet. Co. No. 1 W. T. Finley, A. B. Hardin Sur. R.U.

Woodley Pet. Co. No. 2 W. McMurtay, H. B. Johnston Sur. P.B. 4,270 ft.; lost whipstock.

Hull—Liberty County

Houston Prod. Co. No. 3 J. C. Baldwin, J. Devore Sur. Drlg. 2,112 ft.

Republic-Houston Oil Co. No. 163 Dolbear, J. Devore Sur. Drlg. sh. 1,812 ft.; no report.

Texas Co. No. 8 Hannah fee, J. Devore Sur. T.D. 5,249 ft.; P.B. 3,800 ft.; sdtrkd; T.D. 4,975 ft.; 7-in. 4,974 ft.; I.P. 27 B.P.H.; ¼-in. ck.

Texas Co. No. 9 Hannah fee, J. Devore Sur. T.D. 2,778 ft.; P.B. to S.T. at 2,541 ft.; T.D. 4,795 ft.; 7-in. csg. 4,728 ft. I.P. 26 B.P.H.; ¼-in. ck.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 H. E. Thompson, Hall Sur. Drlg. sh. 4,887 ft.

Buckeye—Matagorda County

United North & South Dev. Co., B. Cotton Sur. R.U.

United North & South Development Co No. 1 G.B.M., Cotton Lge. T.D. 8,667 ft.; 7-in. csg. 8,667 ft.; perfg. csg. 7,798-7,805 ft.

Palacios—Matagorda County

Atlantic-McCarthy No. 3 Foley Ld. Co., L. Goodwin Sur. Drlg.

Atlantic-McCarthy No. 2 Palacios State Bank, L. Goodwin Sur. Loc.

Glenn McCarthy No. 2 Foley, L. Goodwin Sur. Drlg. sh. 8,201 ft.

Glenn McCarthy No. 1 W. M. Rohls, sec 10, L. Goodwin Sur. T.D. 8,843 ft.; stuck; rmg. 4,312 ft.; hole heaving.

Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. Drlg. sh. 9,136 ft.

Orange—Orange County

Tillery & Ryan No. 1 Chesson, Wm. Dyson Sur. R.U.

Livingston—Polk County

Gem Oil Co. No. 5 Kavanaugh, A. Viesca Sur. R.U.

Segno—Polk County

Gulf Oil Corp. No. 8 Wing, sec. 14, I.&G N. Sur. Showed dist. and S.W. on D.S. T. 5,757-62 ft.

Rajo Oil Co. No. 2 Wing, I.&G.N. Sur., sec. 15. R.U.

Refugio—Refugio County

Houston Oil Co. No. 34 Rooke, Thos. Mullen Sur. Core sdy. sh. 5,499 ft.; no report.

South Oil Corp. No. 10 Heard, Refugio townsite. Core oil sd. 4,918 ft.; no report.

Tomoconnor—Refugio County

Hewitt and Daugherty No. 55 O'Connor, O'Connor-Swisher Sur. Core sd. 5,833 ft. no report.

Hewitt and Daugherty No. 56 O'Connor, O'Connor-Swisher Sur. Core sd. and sh. 5,933 ft.; no report.

Spurger—Tyler County

Republic-Houston Oil Co. No. 4 Hurd, N Hurd Sur. T.D. 7,658 ft.; 7-in. csg. 7,635 ft.; tstd. S.W.; perf. lnr. 7,700-04 ft.; I.P. 520 bbls. P.L.O. per day; ¼-in. ck.

Republic-Houston Oil Co. No. 5 Hurd fee, N. Hurd Lge. R.U.

Placedo—Victoria County

Barnsdall Oil Co. No. 24 Pickering and Roos, S.A.&M.G. Sur. Drlg. sdy. sh. 4,750 ft.

Barnsdall Oil Co. No. 25 Pickering and Roos, S.A.&M.G. Sur. No. 5. Drlg. 4,735 ft.

H. B. Ownby No. 5 Malek, S.A.&M.G. Sur. No. 7. T.D. 4,769 ft.; I.P. 226 B.P.D.; ¼-in. ck.

H. B. Ownby No. 3 T. P. Traylor, S.A.& M.G. Sur. No. 7. T.D. 4,769 ft.; I.P. 105 B.P.D.; pmpg.

Westgate Oil Co. et al No. 7 Mikeska, S. A.&M.G. Sur., Lot 74. R.U.

Tellener—Victoria County

Gulf Oil Corp. No. 1 Mahon and Buhler, W. C. Carroll Sur. Drlg. sdy. sh. 4,075 ft.

Magnolia Pet. Co. No. 2 Book, T.&N.O. Sur. Drlg. sh. 4,530 ft.

Clay Creek—Washington County

Sun Oil Co. No. 7 Droeger, J. F. Perry Sur. Drlg. sdy. L. 4,019 ft.

Five Corners—Wharton County

Texas Co. No. 9-B Pierce, J. Caldwell Sur. 10¾-in. csg. 1,133 ft.; drlg. sh. 5,547 ft.

Magnet—Wharton County

Atlantic Ref. Co. No. 4-B H. C. Cockburn, Smith and McKenzie Sur. 10¾-in. csg. 1,363 ft.; T.D. 5,542 ft.; rng. csg. to 5,538 ft.

Humble O. & R. Co. No. 2 Cockburn, Smith & McKenzie Sur. Cg. oil sd. 5,543 ft.

Peyton Bros. No. 1 Gish, Lot 2, Blk. 84, M.L.T. Co. Subd., Smith & McKenzie Sur. 10¾-in. csg. 1,112 ft.; T.D. 5,529 ft.; 7-in. csg. 5,529 ft.; would not flow; installing flow valves; flwg. estd. 3 B. P.H.; C.P. 600 lbs.; T.P. 200 lbs.

Texas Crusader Oil Co. No. 2 H. C. Cockburn, Smith & McKenzie Sur. Loc.

Pickett Ridge—Wharton County

Texas-Crusader Oil Co. No. 2 J. F. Kubella et al, G. C. Gifford Sur. R.U.

Texas Co. No. 33-A Pierce Est., G.B.&N. Sur. No. 4; 9,000-ft. test. T.D. 8,408 ft.; P.B. and sdtrkd. 7,458-92 ft.; T.D. 8,408 ft.; P.B. and sdtrkd. 8,353 ft.; drlg. sh. 8,850 ft.

Withers—Wharton County

Texas Co. No. 31-C Pierce, Wm. Pettus Sur. T.D. 5,557 ft.; 7-in. csg. 5,552 ft. sdtrkd.; drld. cmt. to 5,539 ft.

Texas Co. No. 36-C Pierce Est., Wm. Pettus Sur. T.D. 5,553 ft.; 7-in. csg. 5,547 ft.; swbg.

Texas Co. No. 38-C Pierce, J. Caldwell Sur. R.U.

Texas Co. No. 2 A. C. Thompson, Wm. Pettus Sur. Drlg. sh.&L. 4,035 ft.

GULF COAST WILDCATS

Brazoria County

Humble O. & R. Co. No. 1 W. B. Munson, S. Carter Sur. T.A. loc.

Pure Oil Co. No. 1 P. M. Slade, S. F Austin Lge. T.D. 8,397 ft.; hole heaved to 8,120 ft.; abd.

Texas Co. No. 2 Robbins, James W Brougham Sur. T.D. 7,557 ft.; P.B.; 5,930 ft.; abd.

Chambers County

Merit Oil Co. No. 1 T. and M. Wright, C. Smith Sur. 10¾-in. csg. 1,302 ft.; cg. sh. 5,987 ft.

Fort Bend County

Humble O. & R. Co. No. 1 Schultze, R. Hodge Sur. T.D. 1,010 ft.; drlg. sh. 4,712 ft.

Research, Inc., No. 1 Moore, S. Kennedy Sur. Drlg. sh. 6,650 ft.

Windward Oil Co. No. 1 P. W. Sims, sec. 1, H.&T.C. Sur., 10¾-in. csg. 995 ft.; W.O.C.

Galveston County

R. R. Gray et al No. 1 Eldman, Anthony Hatch Sur. M.I.R.

Hardin County

Coronado Oil Co. No. 1 Ryan, J. G. Bell Sur. 10¾-in. csg. 480 ft.; drlg. sh. 3,860 ft.

Humble O. & R. Co. No. 1 Shone, S. R. Fisher Sur. Drlg.

Harris County

Texas Gulf Prod. Co. No. 1 H. J. Moore, sec. 18, W.C.R.R. Sur. Drlg. sh. 6,587 ft.

Liberty County

O. C. Garvey No. 1 A. C. Weaver, T. Devers Sur. 10¾-in. csg. 440 ft.; drlg. sh. 5,841 ft.
Humble O. & R. Co. No. 2 Sabine Tram, Malinda Whittington Sur. (Devers area). Drlg. sd. 5,864 ft.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. Drlg. sh. 8,530 ft.

Newton County

Houston Oil Co.-Republic Prod. Co. No. 1 Peavy-Moore, sec. 42, H.&T.C. Sur. Rec. 180 ft. P.L.O.; 540 ft. of oily mud on D.S.T. 6,775-6,927 ft.; rng. csg. to test.

San Jacinto County

J. G. Mayo et al No. 1 Gibbs Bros., L. E. Mrequez Sur. T.D. 1,300 ft.; gas sd.; cg. ahead.

Tyler County

Thompson Drlg. Co. and J. C. Bonham, Emily Smith Sur. R.U.

Victoria County

Wallace Sollores et al No. 1 Etta Terrell, J. M. Galban Sur. Drlg. S.W. sd. 3,163 ft.
Stanolind O. & G. Co. No. 1 Henderson & Pickering, E. Benavides Sur. Drlg. sh. 5,217 ft.; gas show 4,786-92 ft.

Trinity County

Gossage-Green and Thompson No. 1 R. E. Thompson, J. A. Hickey Sur. Drk.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

Walker County

W. B. Gossage et al No. 1 Carey Ld. & Dev. Co., D. McDonald Sur. Drlg. sh. 2,200 ft.; no report.

Wharton County

Buch & Holt No. 1 Kaener, F. C. Reynolds Sur. R.U.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 330 ft. S line. Lot 85. 660 ft. SW No ' Wm. Lewis Sur. T.D. 9,785 ft.; set 7-in. csg. in sdtrkd. hole 8,167 ft.; perf. 8,017-23 ft.; 55-min. D.S.T. flwd. after 26 min.; rec. 8,000 ft. S.W. with dist. odor; recmtd. and P.B. 7,500 ft.; tstd. 5,000,000 ft. gas; to retest higher.

Atascosa County

Brown & Bell No. 1 Atkins, 920-ac. tr., Sur. 3. Loc.

Bastrop County

J. W. Bibb No. 1 Lentz, F. Wilkenson Sur. Drlg. 219 ft.
Hantho-Nelson, Inc., No. 1 Litton, 71-ac. tr., Cedar Ck. Community. Top Edw. 2,515½ ft.; T.D. 2,135 ft.; P.B. 2,138 ft.; treating.
Hantho-Nelson No. 2 Litton, 660 ft. W of No. 1, 75-ac. tr., Cedar Ck. Community. M.I.M.
Harvey & Henderson No. 1 Erhard, 175-ac. tr., Knight & White Surs. Spd.
Marts & Beavens No. 1 Lackey, Joshua Gray Sur. Set surf. csg.; W.O.C.
R. Olson No. 1 Murchison, A. Litton Sur. Set csg. 1,828 ft.; T.D. 1,928 ft.; comp. on pmp.; est. 100 B.P.D.; went dead; to rework.
Texas Northern Oil Co. No. 1 Barton, J. Rogers Sur. Drlg. 2,927 ft.

Bell County

W. H. Vernor No. 1 McQueen, 9 mi. S of Belton. Drlg. sd. 1,921 ft.

Bexar County

Oil Country Pipe & Supply Co. No. 1 Weber, Blk. 407. Drlg. 1,626 ft.

Brooks County

Standard Oil Co. of Texas No. 2 Mestina, Lse. 2. T.D. 2,400 ft.; rng. tbg. to test.

Caldwell County

B. C. Armstrong No. 1 Bell, S. Seal Sur. Drld. plugs 2,465 ft.; rng. tbg.
Chisum et al No. 1 Lane, 91-ac. tr., Lockhart Sur. Set csg. 45 ft.; cg. 1,793 ft.
Lanning & Coffield No. 1 Trammell, 150 ft. N line, 750 ft. E line lse., Guadalupe College Sur. Drlg. 1,421 ft.
Taylor Ref. Co. No. 1 Stacey, E. Tyson Sur. No. 21. T.D. Edw. 1,400 ft.; tstd. dry; to test chalk.
Trio Oil Co. No. 1 Wille, Darst Sur. Cg. 1,396 ft.
L. H. Wilson No. 1 Wright, J. Roberts Sur. S.D. 1,900 ft.

Dimmit County

Teas & Maryland Corp. No. 1 McKnight, Blk. 13, sec. 23. S.D.; repairs 2,009 ft.
H. F. Wilcox No. 2 Light ranch, 330 ft. S and W lines, sec. 29, I.&G.N.R.R. Sur., Blk. A. D.&A. 5,908 ft.
H. F. Wilcox No. 3 Light ranch, 330 ft. N and W lines, sec. 113, I.&G.N.R.R. Sur., Blk. A. Drlg. 4,437 ft.
H. F. Wilcox O. & G. Co. No. 4 Light ranch, Blk. 9, sec. 97. Spd.

Duval County

Baltimore Drlg. Co. No. 1 Afflerbach, Sur. 342. D.&A. 1,207 ft.
Henderson & Harvey No. 1-A Welder hrs., 100-ac. tr., sec. 102. D.&A. 2,754 ft.; tstd. S.W. and S.S.O. 2,406-16 ft.
Hougen, Tr., No. 1 Patton, Sur. 148. D.& A. 3,004 ft.
Liberty Oil Co. No. 1 State, Sur. 216. T.D. 1,555 ft.; S.D.
Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 259. Cg. 3,807 ft.
Magnolia Pet. Co. No. 16 Herbst, Sur. 65. R.U.
Navarro Oil Co. No. 1 Bennett, Blk. 33, Navarro Subd., Bennett ranch. T.D. 2,630 ft.; S.D.
Penn-Palangana Oil Co. No. 2 Schallert, Sur. 239. Drlg. 2,813 ft.
H. J. Porter No. 1 Sevier, Palo Blanquito Gr. Cg. sh. 5,237 ft.
H. J. Porter et al No. 1 Montemayor, Las Anacus Gr. Drlg. 2,977 ft.
V. G. Schimmel No. 3 Hagist, Sur. 4. Tstd gas 1,949-62 ft.; cg. ahead.
Slaughter & Hugle No. 1 Hunter Est., 80-ac. tr., sec. 515. Drlg. 98 ft.
Speed Oil Co. No. 1 Gruy Est., C NW¼, SE¼, Sur. 389. Drlg. sd. 2,434-50 ft.; S.O.&G. in pits; D.&A. 3,152 ft.
Standard Oil Co. of Texas No. 4 Gruy, 330 ft. S and E lines, sec. 28, M. Gussett Sur. D.&A. 3,180 ft.
E. R. Thomas Est. No. 1 Pena, J. A. Garcia Sur. No. 8. S.D. 3,125 ft.
Tsesmalis & Shipman No. 2 Canales, C SE¼, Lot 75. Drlg. 3,495 ft.
Woodley Pet. Co. No. 1 Parr, 100-ac. tr., San Andres Gr. Sd. 4,795-4,810 ft.; rocked in with 250 lbs. on tbg.; flwd. 6 B.P.H. P.L.O.; 15/64-in. ck.; C.P. 945 lbs.; T.P. 125 lbs.; installing pumping equip.

Edwards County

Dan Auld No. 1 Henderson, sec. 46, Blk. "E." M.I.M.
Amon G. Carter No. 1 Sweeten, SE¼, Blk. 2, Sur. 49. Drlg. 4,319 ft.

Frio County

Amerada Pet. Corp. No. 1 Harrigan, Flores Sur. 306. Lost hole: T.D. 6,410 ft.; P.B. 5,720 ft.; D.S.T. 5,433-5,720 ft.; good blow 3 hrs.; treated with 3,000 gal. acd.; flwd. 25 min. and died; comp.; 10 B.P.D.; open tbg.; set 7-in. csg. 5,450 ft.
Pagenkopf & Jamieson No. 1 Houston Est., 2,254-ac. tr., J. Figuerroa Sur. Set surf. csg.; S.D.; W.O. equip.

Guadalupe County

Elimag Oil Co. No. 1 Hardiman, Dikes Sur. Set surf. csg.; W.O.C.
Mason Altgelt No. 1 Schubert, Esnaurizer Sur. T.D. 1,081 ft.; P.B. 822 ft. to acid.
Moon O. & G. Co. No. 1 Penshorn, Vincente Duran Sur. S.D. 704 ft.

Hidalgo County

Y. & B. Oil Co. No. 1 Waite, Tr. 382, Los Jidos Gr. Drlg. 3,783 ft.

Jim Hogg County

Henry M. Brown No. 1 Gutierrez, sec. 22, Sh. 4, El Peyote Gr. S.D.; M.I. equip. 2,180 ft.
French Oil Corp. No. 1 Vela, Sur. 573. D.&A. 3,887 ft.

Jim Wells County

H. M. Hill et al No. 1 Kuether, Lots 70 and 75, sec. 52, Haldeman Subd. Spdg.
ac. tr., Los Jaboncillos Gr. Sd. S.G. 6,488-6,503 ft.; D.S.T. 6,488-6,503 ft.; rec. 60 ft. dist.; 1,000 lbs. W.P. 10-min.; took short core; well blew out and burned; S.I. and killed; comp.; cleaning hole to D.D.

Karnes County

DeGraff & Reele No. 1 Cochran, McConnel Lge. Drlg. 1,474 ft.
Ivan Howard No. 1 Moczygemba, Erasmo Seguin 5, League Gr. Drlg. 712 ft.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. Drlg. L. 516 ft.

Lee County

Jas. E. Pederson No. 1 Turner, David Hudson Sur. S.O.&G. 6,140-80 ft.; sdtrkd. at 4,600 ft. and drld. to 6,132 ft.; S.O.&G.; set csg. 6,021 ft.; acdzg. with 20-bbl. load; when opened well flwd. 20-bbl. head and went dead; swbd. oil and wtr.; S.D.; orders.

Live Oak County

Chas. Hanna et al No. 1 Wedding, 200-ac. tr., Haughy Sur. Drlg. sh. 616 ft.
R. P. Holland No. 1 Matkin, Tr. 2433, sec. 46, Floreck Sur. Sd.; S.O.&G. 1,485-89 ft. and 1,496-1,501 ft.; oil stdg. in hole; to place on pmp.; T.D. 1,512 ft.
Marzo Oil Co. No. 1 Alexander, Ayres Sur. Drk.
Petroleum Producers Co. No. 1 Alexander, Nichols ranch, Ayres Sur. M.I.M.
Ranco Oil Corp. No. 1 fee, 660 ft. NW and SW lines, Pointevent Sur. 3. M.I.M.
Unit Pet. Co. No. 1 Nichols, 1,535-ac. tr., S. Ryan Sur. Drlg. 1,211 ft.

Maverick County

Rheingold & Ruben No. 1 Thompson, 264 ft. S and E lines, O. Y. Garcia Sur. D.& A. 807 ft.
Rio Dev. Co. No. 4 State Bank & Trust Co., Sur. 2. S.D. 457 ft.
Wellington Oil Co. No. 1 Chittam, 330 ft. N line, 2,310 ft W line, sec. 129, Blk. 7. Cg. L. 3,183 ft.

McMullen County

Adams & Lefevre No. 1 Selman, sec. 58. Set surf. csg.; stdg.
Alabama Minerals Corp. No. 1 Gordon, SW¼, Sur. 127. D.&A. 2,537 ft.
W. L. Hinds No. 1 Rhodes, NE¼, NW¼ sec. 54. D.&A. 2,006 ft.
Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. Drlg. 2,411 ft.
Pat Tinney No. 1 Rutherford, Blk. 17, Two Rivers Ranch Subd. S.D. cor. T.D. 305 ft.

Medina County

R. S. Bolling No. 1 McMenemy, Sur. 33⅓. M.I.R.
Kelfar Oil Co. No. 1 Briscoe, Schmidt Sur. No. 8. D.&A. 2,500 ft.

Nueces County

Camp Prod. Co. No. 1-A Wardner, sec. 18, Stratton Subd. Sd. 6,281-92 ft.; D.S.T. 6,273-92 ft.; rec. 100 ft. gas and mud; 375 lbs. W.P. 5 min.; ¼-in. cks.; T.&B.
Seaboard Oil Corp. No. 1 John M. Luby, 466 ft. S and W lines, Blk. 1, Sh. 2, Luby Subd. Loc.
Sam E. Wilson No. 1 Herold, Lot 2, sec. 6, Bohemian Colony Subd., Enrique Villareal Sur. D.&A. 7,266 ft.

San Patricio County

Argo Oil Corp. No. 1 Soehnge, 159.66-ac. tr., Blk. 11, Schleicher & Joseph Subd., Delgado Gr. Drlg. 3,763 ft.
Danray Oil Co. No. 1 Davis, Tr. 5, Wm. Boyd Sur. Set csg. 7,117 ft.; W.O.C.
F. P. Schwab No. 1 Smith, Lot A-16, Cubage & Miller Subd., O'Connor ranch. D.S.T. 5,425-36 ft.; rec. 160 ft. oil mud and 900 ft. oily S.W. 9 min.; cg. ahead.
Waterbury Oil Corp. No. 1 Davis, 107-ac. tr., G. Grober Sur. Drlg. sh. 4,617 ft.

Starr County

Calderoni-James-Foliette No. 1 Rodriguez, Blk. 6, Sh. 56. Porc. 80. Set 4½-in. csg. 1,483 ft.; T.D. 1,511 ft.; P.B. T.D. 1,495 ft.; swbd. S.W.; S.D.
Gilcrease Oil Co. No. 1 Kelsey-Bass, 40-ac. tr., sec. 11, Porc. 77. S.D. 3,265 ft.
Henshaw Bros. & Davis No. 1 Garcia, Tr. 40, Porc. 89. Drlg. sh. 1,216 ft.
E. J. Pearl No. 1 de la Garza, Sur. 262. R.U.
Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. T.D. S.W. sd. 5,374 ft.; stdg. S.I.; C.P. 2,500 lbs.; D.S. stuck.; fsg.

Webb County

Adams & LeFevre No. 1 Garcia, Blk. 27, Hughes Subd., Sur. 592. Set surf. csg.; W.O.C.
R. S. Bolling No. 1 Fort Worth Natl. Bank, Sur. 466. M.I.M.
Boone Bros. No. 1 Frost, Sur. 21. Cg. 1,596 ft.
Eugene Garner No. 3 Saldivar, 150 ft. S and E lines, Blk. 12, Sur. 657. D.&A. 1,050 ft.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. D.&A. 2,015 ft.
Paul Meaders No. 1 Garcia, Sur. 338. Loc
Randon Oil Co. No. 1 Palmer, Sur. 474. Drlg. 1,317 ft.

Willacy County

La Sal Vieja Oil Corp. No. 1 Garcia Ld. & Cattle Co., Tr. 73. M.I.M.
Magnolia Pet. Co. No. 1 Armendiaz, Sh. 4, San Juan de Carricitos Sur. Fsg. 525 ft.

Williamson County

Thos. W. Davis, Jr. No. 1 Colman & Davis, Boggus Sur. Drlg. sh. 554 ft.

Wilson County

Pat Higgins No. 1 Dickey, Rodriguez Sur. T.A. 2,057 ft.
Pat Higgins No. 1 Higgins, Rodriguez Sur. 237. M.I.M.

Zapata County

Eugene Mays No. 1 Flores, Blk. 198, Doty Subd., Charco Redondo Gr. Drlg. 1,662 ft.

Zavalla County

G. Hyson No. 1 Byrd, 5,000-ac. tr., sec. 130. Loc.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 7-C McCampbell, Lot 1, Blk. 41. Washing.
Atlantic Ref. Co. No. 1-F McCampbell, Blk. 28. Drlg. 6,880 ft.
Atlantic Ref. Co. No. 3-B Murray, Lot 12, Blk. 12. O.&G. sd. 7,025-7,117 ft.; perf. 7,100-03 ft.; comp.; 300 B.P.D.; ¾-in. ck.
Atlantic Ref. Co. No. 1-C Murray, Lot 6, Blk. 38. Sd. 7,091-7,101 ft. and 7,111-18 ft.; set csg. 7,138 ft.; perf. 6,532-38 ft.; P.B. to 6,540 ft.; comp.; 200 B.P.D. on ¼-in. ck.; sd. 6,532-40 ft.
Atlantic Ref. Co. No. 1-B Porterfield, Lot 8, Blk. 10. Cg. 7,082 ft.
Atlantic Ref. Co. No. 2-B Porterfield, Lot 11, Blk. 8. R.U.
Atlantic Ref. Co. No. 3-B Porterfield, Lot 8, Blk. 11. Drlg. 1,850 ft.
Atlantic Ref. Co. No. 1-C Porterfield, Lot 8, Blk. 12. Rmg. 7,121 ft.
Buckingham Oil Co. No. 2-A McCampbell, sec. 42. O.W.W.O.; comp.; 30 B.P.D.; ⅛-in. ck.; perf. 6,543-47 ft.
Buckingham Oil Co. No. 5-A McCampbell, Lot 4, Blk. 39. O. sd. 6,544-48 ft.; reperf. csg. 6,540-42 ft.
Buckingham Oil Co. No. 12-A McCampbell, Blk. 42. Perf. 7,095-7,119 ft.; S.W. & O.; pkgd. to reperf.
Buckingham Oil Co. No. 1-B McCampbell, Lots 13 and 14, Blk. 40. O.W.W.O.; old T.D. 6,557 ft.; fsg.
Buckingham Oil Co. No. 1-C McCampbell, 33.8-ac. tr., Blk. 27. T.D. 7,150 ft.; prep. rework.
Graham & Buckingham Oil Co. No. 1-D Porterfield, Lot 11, Blk. 9. O.&G. sd. 7,087-7.137 ft.; set 7-in. csg. 7,148 ft.; clg. pits.
Landreth Prod. Co. No. 6-A McCampbell, Lot 1, Blk. 40. Drlg. 5,520 ft.
Neill & Peterson No. 1-A McCampbell, Lot 1, Blk. 43. Set csg. on 7,100-ft. sd.; to perf.
Peach Tree Oil Co. No. 2 Porterfield, Lots 15 and 16, Blk. 10. Sd. O.&G. 7,085-7,132 ft.; set csg.; W.O.C.
Rutherford Oil Corp. No. 2 Scrivener, Lot 16, Blk. 11. Drlg. 1,506 ft.
Rutherford Oil Corp. No. 1 Yarbrough, Lot 2, Blk. 37. Perf. 7,116½-19 ft.; comp.; 128 B.P.D. on ¼-in. ck.
Shasta Oil Co. No. 3 Vaughn, Lot 11, Blk. 10. Drlg. 3,679 ft.

West Tuleta—Bee County

Blanco Oil Co. and Buchanan No. 3-B Perez, SE¼, sec. 9, Ragley Subd., Uranga Gr. Sd. 3,075-3,119 ft.; comp.; 32.16 B.P.D.
Salt Dome Oil Co. No. 3 Tuleta Merchantile Co., SW¼, sec. 10, Wragley Subd., Uranga Gr. Jetting; T.D. 3,079 ft.; tstg.

Alta Mesa—Brooks County

Standard Oil Co. of Texas No. 1 Mestina, Lse. No. 1, O.W.W.O.; old T.D. 3,588 ft.; drlg. 3,813 ft.
Standard Oil Co. of Texas No. 5 Mestina, Lease No. 1, 7-in. csg. set 3,220 ft.; T.D. 5,505 ft.; perf. 4,513-20 ft.; S.D. to W.O.
Standard Oil Co. of Tex. No. 9 Mestina Lse. No. 1, La Mestina and Gonzalena Sur. Set surf. csg. 300 ft.; W.O.C.

Alta Verde—Brooks County

Bishop & Woods No. 1 Maupin, Sur. 311. Drlg. sh. 1,893 ft.
Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.). T.D. 1,810 ft.; S.D.
Star Dev. Co. No. 1 Singer, Blk. 8, Sur. 436. O.W.W.O.; old T.D. 948 ft.; set 5 7/16-in. csg. 856 ft.; tstd. gas; comp.; 6 B.P.D.; perf. 839-43 ft.

Branyon—Caldwell County

Adams & Richards No. 4 Flowers, J. Neill Sur. R.U.
Blundell Oil Co. No. 2 fee, Jarman Sur. Cg. sh. 2,212 ft.
Cargill et al No. 1 Patton, J. R. Miller Sur. T.D. ch. 2,082 ft.; T.C. 1,910 ft.; set 6⅝-in. csg. 1,900 ft.; W.O.C.
Lincoln Pet. Co. No. 8 Branyon, J. R. Miller Sur. Drlg. sh. 1,656 ft.
Martell Pet. Co. No 2. Clark, J. R. Miller Sur. Drlg. 1,815 ft.
Martell Pet. Co. No. 1 Young, J. R. Miller Sur. T.D. 2,342 ft.; pmpg. oil and sulf. to P.B. and perf.
Taylor Ref. Co. No. 6-B Branyon, D. Cooper Sur. R.U.
Universal O. & G. Co. No. 2 Calliham, Miller Sur. Drlg. sh. 519 ft.
Vaughey No. 3 Clark, J. R. Miller Sur. Comp.; 1,000,000 ft. gas, 25 bbls. oil per day; T.D. 2,117 ft.
Wm. Vaughy No. 7 Flowers, J. A. Neill Sur. R.U.

Buchanan—Caldwell County

Fred J. Adams No. 2 Dale, Wm. Spillars Sur. R.U.
Carter et al No. 2 Brown, Cannon Sur. Set csg. 1,990 ft.; W.O.C.; T.D. 2,000 ft.
Edwill Oil Co. No. 3 Brown, Cannon Sur. T.D. 2,155 ft.; set csg. 2,117 ft.; comp.; 107 B.P.D. on pmp.
Edwill Oil Co. No. 4 Browne, Chas. M. Cannon Sur. R.U.
McAlester Fuel Oil Co. No. 2 Miears, Chas. M. Cannon Sur. Set csg. 1,942 ft.; W. O.C.
Potter P. L. Co. No. 1 Medlin, Cannon Sur. T.D. 1,927 ft.; set csg. 1,910 ft.; comp.; 100 B.P.D. on pmp.
Potter P. L. Co. No. 2 Medlin, Cannon Sur. T.D. 2,245 ft.; flwd. 16 B.P.D. on 2-in. tbg.
Potter P. L. Co. No. 3 Medlin, Cannon Sur. T.D. 2,120 ft.; top Serp. 1,980 ft.; comp.; est. 150 B.P.D.
L. G. Priest No. 1 Chambless, Goodman Sur. T.D. Edw. 2,645 ft.; swbg. S.O.

Burdett Wells—Caldwell County

Taylor Ref. Co. No. 1 Punch, Guad. College Sur. D.&A.

Dale—Caldwell County

Ogden & Reed No. 2 Lackey, S. Damon Sur. Drlg. Serp. 1,916 ft.

Dunlap—Caldwell County

R. E. Fair No. 1 Dunlap, Seal Sur. T.D. 2,364 ft.; comp.; 200 B.P.D.
Chas. Schreiner No. 1 Moody, Seal Sur. S.D.; T.D. 2,200 ft.

Salt Flat—Caldwell County

Pummel & Brady No. 1 Jackson, S. Morris Sur. Drlg. 1,137 ft.
Elimag Oil Co. No. 1 Pope, J. P. Rains Sur. M.I.M.
Hantho-Nelson, Inc., No. 1 New, James Hinds Sur. Drlg. 316 ft.

Benavides—Duval County

Argo Oil Co. No. 8 Carillo, sec. 9, Sweden Farm Lots. Set surf. csg. 550 ft.; W.O.C.
Arkansas Fuel Oil Co. No. 5 Rossi, Lot 25, Sweden Farm Trs. Set 7-in. csg. at 4,780 ft.; comp.; no gauge.
Arkansas Fuel Oil Co. No. 6 Rossi, Santos Flores Sur. Drlg. 216 ft.
Benedum & Trees Oil Co. No. 6 Puig, San Andres Gr. Sd. 4,774-83 ft.; set csg.; W.O.C.
Benedum & Trees Oil Co. No. 5 Puig, San Andres Gr. Set sur. csg.; W.O.C.
M. Benzaquin No. 1 Flores, sec. 9, Sweden Farm Lots. Drlg. 3,624 ft.
Bridwell Oil Co. No. 3 Anciro, 152-ac. tr., Lot 19, Sweden Farm Lots. Drlg. 3,251 ft.
Frank Gravis Oil Co. No. 4-A Puig, 100-ac. tr., San Andres Gr. Cg. 3,416 ft.

Gravis & Doran No. 5 Puig, 200-ac. tr., San Andres Gr. Set csg. 4,799 ft.; W. O.C.
Hiawatha Oil Co. No. 3 Parr, San Andres Gr. Drlg. 3,392 ft.
Navarro Oil Co. No. 2 Owens, Blk. 19, Sweden Subd. Set csg. 4,765 ft.; comp.; 89.6 B.P.D. on ⅛-in. ck.
Nordan & Morris No. 1 West, 50-ac. tr., Santos Flores Gr. Perf. 4,770-74 ft.; comp.; no gauge.
Nordan & Morris No. 2 West, sec. 10, Sweden Farm Lots. R.U.
Parr & Delaney No. 12 Valleo, 150-ac. tr., Lot 24, San Andres Gr. Set csg. 4,794 ft.; T.D. 4,801 ft.; washing.
Reynosa Oil Co. No. 4 Wilson, 80-ac. tr., sec. 9, Sweden Farm Lots. Set surf. csg. 500 ft.; W.O.C.
Reynosa Oil Co. No. 5 Wilson, 80-ac. tr., sec. 9, Sweden Farm Lots. R.U.
Russ Pet. Co. No. 6 Farias, Blk. 9, Sweden Farm Lots. Drld. plugs; rng. screen and lnr. to comp.
Russ Pet. Co. No. 1 Rossi, sec. 10, Sweden Farm Lots. R.U.
Standard Oil Co. of Kans. No. 6 Parr, 80 ac. tr., San Andres Gr. Drlg. 4,585 ft.
Standard Oil Co. of Kansas No. 7 Rossi, Santos Flores Gr. T. sd. 4,781 ft.; T.D. 4,792 ft.; comp.; 235.86 B.P.D.; ⅞-in. ck.
Standard Oil Co. of Kans. No. 2 Southland Life, sec. 2, Santos Flores Gr. Set 7-in. csg. 4,748 ft.; T.D. 4,815 ft.; drlg. plugs.
Standard Oil Co. of Kansas No. 9 Rossi, Santos Flores Gr. Set surf. csg. 580 ft.; W.O.C.
Standard Oil Co. of Kansas No. 3 Walstad, 100-ac. tr., Blk. 9, Sweden Farm Lots. Drlg. 2,510 ft.

Charamousca—Duval County

N. V. Duncan No. 15 Worden-Draught, Sur. 151. Cg. 1,516 ft.

Driscoll—Duval County

Continental Oil Co. No. 18-A Sevier, Sur. 450. Set csg. 3,351 ft.; sd. 3,320-49 ft.; reworking to reduce G./O. ratio.

Hoffman—Duval County

Bridwell Oil Co. No. 5 Green, Sur. 118. Oil sd. 2,715-18 ft.; set 7-in. csg. at T.D. 2,718 ft.; W.O.C.
Cox & Hamon No. 20 Green, Sur. 118. T.D. 293 ft.; m. off rig.
Cox & Hamon No. 24 Green, sec. 118. Sd. 2,714-27 ft.; comp.; 100 B.P.D. on ⅜-in. ck.
Cox & Hamon No. 25 Green, Sur. 118. Sd. 2,728-31 ft.; set 7-in. csg. 2,729 ft.; comp.; 80 B.P.D.; T.D. 2,733 ft.
Cox & Hamon No. 7 Robles, sec. 68. Sd. 2,684-89 ft.; comp.; 75 B.P.D.
Cox & Hamon No. 8 Robles, sec. 68. T.D. 2,790 ft.; comp.; est. 75 B.P.D.
Cox & Hamon No. 6 Robles, Sur. 68. Sd. 2,715-18 ft.; comp.; 60 B.P.D.
Duval Oil Corp. No. 9-A Hoffman, Sur. 118. Oil sd. 2,734-35½ ft.; set 7-in. csg. 2,732 ft.; T.D. 2,814 ft.; comp.; 4,000,000 ft. gas.

Kohler—Duval County

Bunn Bros. & Coates No. 6-B Peters, Sur. 29. Sd. 1,835-47 ft.; set csg. 1,834 ft.; W.O.C.
Cox & Hamon No. 2 Gruy, Sur. 157. Sd. 1,845-48 ft.; retstg.

Labbe—Duval County

Humble O. & R. Co. No. 9 Roos, sec. 119. T.D. 2,809 ft.; comp.; no gauge.
Magnolia Pet. Co. No. 9 Labbe, Sur. 1. Sd. 2,867-70 ft.; set csg.; W.O.C.

Lundell—Duval County

Govt. Wells Oil Co. No. 7 Lundell, sec. 140. S.D.; repairs 700 ft.

Palangana—Duval County

Penn Palangana Oil Co. No. 1 C. K. Gravis Sur. 250. D.&A. 6,170 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 6 D.C.R.C., Sur. 203. Comp.; 75 B.P.D. on ⅜-in. ck.
Magnolia Pet. Co. No. 7 D.C.R.C., Sur. 203. Drlg. 317 ft.

Seven Sisters—Duval County

S. and D. Daube No. 56 Campos, Sur. 224. T.D. 2,734 ft.; W.O. pmp.
S. and D. Daube No. 39 Campos, Sur. 224. Set 7-in. csg. 2,669 ft.; T.D. 2,712 ft.; W.O.C.
S. & D. Daube No. 38 Campos, Sur. 224. Tstg.; T.D. 2,715 ft.; set 7-in. csg. 2,654 ft.
S. and D. Daube No. 40 Campos, Sur. 224. Drlg. 1,987 ft.
Humble O. & R. Co. No. 23 Dowdy, Sur. 272. M.I. rig.
S. & D. Daube No. 37 Campos, Sur. 224. T.D. 2,730½ ft.; W.O. pmp.
Rudco O. & G. Co. No. 1 Ellis, 160-ac. tr., Sur. 308. M.I.M.

Sweden—Duval County

Hiawatha Oil Co. No. 1 Herberger, Sur. 14, Ball Subd., Agua Poquita Gr. Tstg. sd. 5,849-57 ft.

Thomas-Lockhart—Duval County

Lockhart Bros. No. 2 Parr, Sur. 277. Sd. 4,650-82 ft.; comp.; no gauge; S.I.
Lockhart Bros. No. 3 Parr, Sur. 277. Set surf. csg. 261 ft.; W.O.C.

Pearsall—Frio County

Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.) Set 7-in. protective csg. 10,341 ft.; drlg. 10,569 ft.
Amerada Pet. Corp. No. 4 Smith, Mason Sur. 322. Drlg. ch. 5,357 ft.

Darst Creek Extn.—Guadalupe County

Bayou River Oil Co. No. 1 State, J. K. Davis Sur. Dr. sh. 1,618 ft.

M. E. Brooks No. 1 Applin, Hodges Sur. Drlg. 1,823 ft.
Kenedy & Crowley No. 1 Anderson, J. R. Robinson Sur. S.D.; W.O. material 2,605 ft.
Riddle Oil Co. No. 2 Williams, DeWitt Sur. No. 13. S.D. 1,960 ft.
Texas Co. No. 8-A Knoblock, Joel Robinson Sur. Drlg. ch. 2,135 ft.

Luling—Guadalupe-Caldwell Counties

Bruce Albright No. 2 Cosey, J. Henry Sur. Drk.
Tom Graham No. 1 Pearnor, R. Hall Sur. Drk.
Magnolia Pet. Co. No. 16 Tiller, J. Henry Sur. Drlg. plugs; csg. set 2,095 ft.
Mee & McNeil No. 1 Cosey, John Henry Sur. Comp.; 5 B.P.D.; T.D. 2,163 ft.
Millican & Norman No. 1 Lampkin, J. Henry Sur. T.C. 1,714 ft.; T.D. 2,128 ft.; set csg. 2,127 ft.; R.U. pump.
Millican & Norman No. 2 Lampkin, J. Henry Sur. Drlg. plugs 46 ft.
Potter P. L. Co. No. 1 Cartwright, J. Henry Sur. R.U.
Spokane O. & G. Co. No. 1 Hibbits, J. Henry Sur. S.D. 410 ft.
Rio Bravo Oil Co. No. 17-L Merriweather, John Henry Sur. Spd.
Taylor Ref. Co. No. 1 Harris, Cottle Sur. T.D. Edw. 2,090 ft.; R.U. to pmp.

Staples—Guadalupe County

W. W. Lincoln No. 1 Sherrill, G. Allen Sur. Drlg. 217 ft.

Zoboroski—Guadalupe County

Felmont Corp. No. 4 Schueneman, G. DeWitt Sur. Cg. 2,447 ft.
Forest Dev. Co. No. 4 Emma Hoffman, G. DeWitt Sur. T.D. 2,439 ft.; comp.; 20 B.P.D.
Forest Dev. Co. No. 2 Hoffman, G. DeWitt Sur. Set csg. 2,197 ft.; T.D. 2,214 ft.; stdg.
Forest Dev. Corp. No. 6 Hoffman, DeWitt Sur. Set csg. 2,284 ft.; T.D. 2,288 ft.; stdg.
Skivereen Oil Co. No. 1 State of Texas, Guad. River bed, 50 ft. S of No. 1. Tstg.; T.D. 2,240 ft.; pmp. dry; stdg.

LaBlanca—Hidalgo County

Dee Davenport No. 1 Hidalgo Wtr. & Imp. Dist., Lot 16, Engleman Subd., Smith Sur. 262. Drlg. 4,912 ft.
Dee Davenport No. 2 Swallow, Clyde Fennis Ld. Co. Sur. Drlg. 6,407 ft.
Gulf States Oil Co. No. 2 Delta Orchards, Lot 3, Blk. 94, Engleman, Jr. Sur. Resubd. Drlg. sh. 2,520 ft.

Samfordyce—Hidalgo and Starr Counties

H. J. Porter No. 1 Flores, Tr. 250, Porc. 38. Perf. 2,996-99½ ft.; comp.; 168 B. P.D.; ⅞-in. ck.

Alworth—Jim Hogg County

French Oil Corp. No. 5 Vela, Blk. 14, Sur. 39. D.&A. 1,072 ft.

Sandia—Jim Wells County

Smith & O'Bannon No. 1 Allen, Lot 1, Blk. "B," Bode Subd. Drlg. 368 ft.
Joe Walsh et al No. 2 Wade, Lot 2, Blk. "C," Bode Subd. Drlg. 323 ft.

North Pettus—Karnes County

Magnolia Pet. Co. No. 17 Porter, B.&B. Sur. 23. Completing; T.D. 3,708 ft.
Magnolia Pet. Co. No. 18 Porter Sur. 23. Sd. 3,692-3,703 ft.; R.U. to pmp.

South Burnell—Karnes County

Dirks Bros. Co. No. 4 Ruhman, Johnson Sur. Set csg. on sd.; W.O.C.
Luling O. & G. Co. No. 4 Boyce, W. J. Porter Sur. Spdg.

Kingsville—Kleberg County

Harry Edwards No. 1 Noack, Lot 4, Blk. 50, Subd. of town of Uriah. T.D. 3,535 ft.; S.D.

Fort Merrill—Live Oak County

Mills Bennett Prod. Co. No. 2 Watson & Shipp, Pablo Salinas Sur. R.U.

Calliham—McMullen County

J. V. Fleming No. 4 Lark, Scrugham Sur. Set 5½-in. csg. 1,041 ft.; W.O.C.
J. V. Fleming No. 5 Lark, Scrugham Sur. Drlg. 847 ft.

Ezzell—McMullen County

Edwin M. Jones No. 12 Ezzell, sec. 23, H. Russell Sur. Set csg. 1,530 ft.; stdg.
Edwin M. Jones No. 13 Ezzell, Russell Sur. 23. Sd. 1,498-1,503½ ft.; set csg. 1,510 ft.; stdg.
E. M. Jones No. 14 Ezzell, Russell Sur. 23. Sd. 1,520-23 ft.; set csg. 1,540 ft.; W.O.C.
Edwin M. Jones No. 16 Ezzell, Russell Sur. 23. Oil sd. 1,517-22 ft.; set csg. 1,543 ft.; stdg.
Edwin M. Jones No. 17 Ezzell, NE¼, NE¼, sec. 23. Sd. 1,499-1,506 ft.; set csg.; W.O.C.
Edwin M. Jones No. 18 Ezzell, NE¼, NE¼, sec. 23. Comp.; 10 B.P.H.; T.D. 1,520 ft.
Edwin M. Jones No. 19 Ezzell, NE¼, NE¼, sec. 23. R.U.
Edwin M. Jones No. 4-B Ezzell, NE¼, SE¼, sec. 20. Spd.

South Calliham—McMullen County

Bill Howard No. 9 Claunch, Hely Sur. R.U.

Loma Alta—McMullen County

J. T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. S.D. 2,513 ft.

Taylor—Medina County

R. J. Taylor No. 1-A fee, Brucket Sur. Comp.; 6 B.P.D. oil; 45 B.P.D. wtr.; sd. 341-54 ft.

Agua Dulce—Nueces County

Heep Oil Corp. No. 1 Purl, 440-ac. tr., Subd. No. 2. Set surf. csg. 245 ft.; W. O.C.
Texon Drlg. Co. No. 2 Elliff, 3,054-ac. tr., Longorio Sur. Set csg. 6,500 ft.; drlg. plugs.
United Prod. Co. No. 3-A Rivers, sec. 9, Peters Subd. Washing; T.D. 8,540 ft.; set csg. 5,729 ft.; W.O.C.
United Prod. Co. No. 1 Schroeder, sec. 87, Paul Subd., Driscoll ranch. Drlg. sdy. sh. 7,061 ft.

Clara Driscoll—Nueces County

O. W. Killam No. 3 Ellick, 86-ac. tr., Sur. 109. Set 7-in. csg. 3,934 ft.; perf. 3,905 10 ft.; washing.
Mid-Continent Pet. Corp. No. 3 Sevier, R. Russell Sur. Oil sd. 3,793-3,812 ft.; set 7-in. csg. 3,808 ft.; comp.; 97 B.P.D.; ¼-in. ck.

S. Clara Driscoll—Nueces County

Sun Oil Co. No. 1 Flynn, sec. 110, Paul Subd., Driscoll ranch. M.I.M.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Brett, Lot 1, Blk. 48. Set csg. 6,665 ft.; W.O.C.
Humble O. & R. Co. et al No. 5 Cordz, Lot 16, Blk. 45. T.D. 6,663 ft.; flwg. pits.
Humble O. & R. Co. et al No. 1 Downey. Drlg. sh. 4,056 ft.
Humble O. & R. Co. et al No. 1 Graham, Lot 15, sec. 41. Set 7-in. csg. 6,645 ft.; comp.; 201 B.P.D.
Humble O. & R. Co. et al No. 4 Roberdeau, Lot 5, Blk. 49. T.D. 6,662 ft.; flwg. in pits.
Humble O. & R. Co. et al No. 2 Swan, Lot 2, Blk. 54. Drlg. sh. 6,538 ft.
Humble O. & R. Co. et al No. 2-B Thompson, Lot 8, Blk. 55. Tstg.; T.D. oil sd. 6,662 ft.

London—Nueces County

Wellington Oil Co. and Seaboard Oil Corp No. 1-B Lehman, NW¼, SE¼, sec. 25 T.D. 5,000 ft.; S.D.; W.O.

Luby—Nueces County

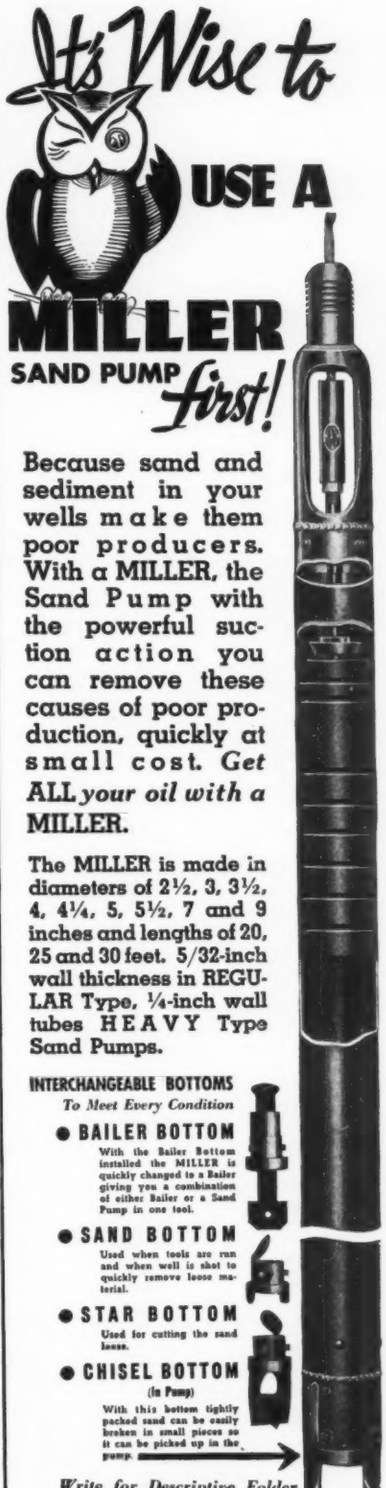
Seaboard Oil Corp. No. 2 Luby, Blk. 4 Sh. 2. D.S.T. 5,043-60 ft.; set csg. and perf. 5,050½-54½ ft.; comp.; 159 B.P.D.; ⅛-in. ck.
Seaboard Oil Corp. No. 3 Luby, Blk. 3, Sh. 2. Spdg.
Seaboard Oil Corp. No. 1 Schaeffer, Blk 3, Sh. 2, Luby Subd. Set csg. at T.D. 7,310 ft.; sd. 7,290-7,310 ft.; perf. 5,058-62 ft.; flwg. wash wtr. and oil.
Stanolind O. & G. Co. No. 2 McCann, 565.3-ac. tr. Drlg. 3,427 ft.

Saxet Heights—Nueces County

Wm. Brady No. 2 Whalen, Villareal Sur. Drlg. 3,065 ft.
W. H. Harrison No. 3 McConnell, Blk. 5, Oak Park Addn. Set surf. csg. 307 ft.; stdg.
Phillips Pet. Co. No. 8 Corpus Christi Golf & Country Club, Villareal Sur. T.D. 2,078 ft.; perf. 4,051-56 ft.; recmtd.; W.O.C.

Saxet—Nueces County

R. B. Bryant No. 1 Frank, 50-ac. tr., Sur 500. M.I.M.
Bryant & Howell No. 10 Frank, 40-ac. tr Sur. 500. Set 5-in. csg. 6,988 ft.; perf. 6,730-40 ft.; squeezed to retest.
Bryant & Howell No. 4 Plachy, Sur. 25 Sd. 4,161-75 ft.; set 5½-in. csg. 4,250 ft.; W.O.C.
Donico Prod. Co. No. 8 Donigan, 80-ac. tr. sec. 7, Rge. 6. Sd. 4,800-70 ft.; completing.
J. E. Freeman No. 1 Scott, Sur. 500. Cg. 5,742 ft.
Greta Oil Corp. No. 2 Bliss, 25-ac. tr., Sur. 406. Fsg.; T.D. 6,900 ft.
Greta Oil Co. No. 5 Humphries, Stevens Sur. Drlg. 6,487 ft.
Hiawatha Oil Co. No. 13 Hutchins-Stillwell, Blk. 30, Sheppard Farm Lots. Perf. 6,900-05 ft.; flwd. S.W.; squeeze job.
Houston Oil Co. No. 5-A Harrell, Sheppard Farm Lots. Drlg. 2,322 ft.
Houston Oil Co. No. 8-A Harrell, Lot 24, Sheppard Farm Lots. Drlg. sh.&L. 4,055 ft.
Houston Oil Co. No. 4 Isensee, Lot 2, Sheppard Farm Lots. Set csg. 4,564 ft.; W.O.C.
Houston Oil Co. No. 4 Hunter, 75-ac. tr., sec. 8, Rge. 5. Drlg. plugs in surf. csg 598 ft.
H. H. Howell No. 6 Hutchins, 80-ac. tr., Sur. 416. Cg. 6,897 ft.
Kepley Prod. Co. No. 7 Donigan, 100-ac. tr., sec. 7, Rge. 5. Sd. 4,544-46 ft.; cg. 4,547 ft.
Maryland Corp. and Renwar Oil Corp. No. 2 Stillwell-Sagarino, Sur. 500. Drlg. 4,283 ft.
Maryland Corp. and Renwar Oil Co. No. 2-B Morgan, Sur. 415. Drlg. 5,286 ft.
Morgan & Chapman Minerals Corp. No. 9 Morgan-Clark, NE¼, Sur. 405. T.D. 6,945 ft.; sdtrkd. 4,622 ft.; drlg. 6,542 ft.
Phillips Pet. Co. No. 7 Morgan, S½, sec. 405. Drlg. 3,133 ft.
Republic Nat. Gas Co. No. 21 Dunn, Blk. 37, Sheppard Farm Lots. Drlg. 5,521 ft.
Richardson Pet. Co. No. 3 Harrell, Blk. 33, Sheppard Farm Lots. Drlg. 3,806 ft.
Richardson Pet. Co. No. 6 Hoolscher, Blk. 22, Russell Farm Lots. Set csg. 4,425 ft.; W.O.C.
Richardson Pet. Co. No. 6 Perkins-La-Gasse, 20-ac. tr., Sheppard Farm Lot 22. Perf. 5,805-15 ft.; comp.; 188.36 B. P.D. on ⅛-in. ck.
Richardson Pet. Co. No. 13 Quiros, Sur. 311. Drlg. 3,008 ft.
Richardson Pet. Co. No. 11 Sedwick, 184 ac. tr., Dunn Sur. 312. Cg. 5,413 ft.


It's Wise to
USE A
MILLER
SAND PUMP first!
INTERCHANGEABLE BOTTOMS
To Meet Every Condition
● BAILER BOTTOM
With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.
● SAND BOTTOM
Used when tools are run and when well is shot to quickly remove loose material.
● STAR BOTTOM
Used for cutting the sand loose.
● CHISEL BOTTOM
(In Pump)
With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.
Write for Descriptive Folder and Price List
See Page 1186 COMPOSITE CATALOG
PATENTED
NO. 1370340
NO. 1523604
NO. 1787390
NO. 1862828
NO. 1866528
NO. 2053667

Because sand and sediment in your wells make them poor producers. With a MILLER, the Sand Pump with the powerful suction action you can remove these causes of poor production, quickly at small cost. *Get ALL your oil with a* MILLER.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type, ¼-inch wall tubes HEAVY Type Sand Pumps.

MILLER Sand Pump Co.

General Offices and Shop, Box 4516
OKLAHOMA CITY, OKLA., U. S. A.

Branch Shops and Offices:
SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

Ben F. Smith No. 1 Ocker, Villareal Sur T.D. 4,879 ft.; perf. csg. 4,861½-66 ft.; comp.; 164 B.P.D.; sd. 4,858-67 ft.

Southern Minerals Corp. No. 21 Bliss, Sur. 404. Blew out while attempting to set 1,114 ft. surf. csg.; blowing wild.

Southern Minerals Corp. No. 9 Ocker. 205-ac. tr. Set 7-in. csg. 4,863 ft.; W.O.C.

Texon Drlg. Co. No. 1 Janosek, 32.74-ac. tr., Sur. 25. Cg. 3,806 ft.

Warner Quinlan Co. of Tex. No. 5 Isensee, Blk. 1, Sheppard Farm Lots. Set csg. 4,894 ft.; T.D. 4,904 ft.; perf. 4,541-61½ ft.; recmtd.; W.O.C.

Sullivan—Nueces County

Lockhart et al No. 1 O. Purl, Lot 2, sec 7, Ross Peters Subd. No. 2. Sd. 7,032-52 ft.; P.B. and sdtrkd.; drlg. sdtrkd. hole 6,737 ft.

Midway—San Patricio County

Phillips Pet. Co. No. 3 Ivey, sec. "K." Pauls Subd. Set csg. 5,360 ft.; clg. in plts.

Phillips Pet. Co. No. 3 Schmidt, sec. 81 Set csg. 5,360 ft.; perf. 5,342-45 ft.

Plymouth—San Patricio County

Heep Oil Corp. No. 8-F Welder, sec. 46. Drlg. sdy. sh. 1,816 ft.

Plymouth Oil Co. No. 81-C Welder, sec 70. Sd. 5,454-60 ft. and 5,484-91 ft.; set 7⅝-in. csg. 5,491 ft.; comp.; 189 B.P.D.; 9/64-in. ck.; perf. 5,486-91 ft.

Plymouth Oil Co. No. 82-C Welder, sec. 70. Drlg. 1,956 ft.

Sun Oil Co. No. 3 Roundtree, sec. 34 I & 4. Perf. 5,636-37 ft.; pmpd. 30 bbls. oil, 50 bbls. S.W.; sanded up; reworking.

Taft Field—San Patricio County

Humble O. & R. Co. No. 28 Mayo, 32-ac. tr., Ottman Sur. Drlg. sh. 1,668 ft.

Humble O. & R. Co. No. 29 Mayo, 32-ac tr., Ottman Sur. Set csg.; oil sd. 3,983 ft.; comp.; 65 B.P.D.

Barbacoas—Starr County

E. E. Merren No. 1-A S.C.C.C., Blk 34 Lambeth Subd., Porc. 89. Set csg. at T.D. 5,640 ft.; sd. 5,470-91 ft.; C.O.

Ricaby—Starr County

Barnett et al No. 1 Valadez, Porc. 84. Sd. 1,890-96 ft.; T.D. 1,896 ft.; D.&A.

Dean Bros. No. 1 Valadez, Porc. 84. Sd. 1,863-72 ft.; set 5½-in. csg. 1,872 ft.; T.D. 1,873 ft.; S.D.

Dodd, Tr., No. 5 Wood Est., Porc. 84. Set csg. 1,772 ft.; W.O.C.

J. W. Edwards No. 1 Vela, Porc. 84. Cg. sh. 1,823 ft.

Carolina-Texas—Webb County

E. J. Purl et al No. 2 Garza, Sur. 48. R.U.

Cole—Webb County

O. W. Killam No. 56 Benavides, Blk. 17, sec. 8. R.U.

Magnolia Pet. Co. No. 3 Valdez, Valdez Sur., Blk. 8. Rmg. 2,932 ft.

Killam—Webb County

Hamill & Smith No. 1 Garcia, 80-ac. tr., Sur. 337. Sd. 1,902-12 ft.; comp.; 250 B.P.D. on ¼-in. ck.

Hamill & Smith No. 2 Garcia, 80-ac. tr., Sur. 337. Set csg. on sd. 1,900 ft.; W.O.C.

O. W. Killam No. 1 Garcia-Villareal, E½, SE¼, Sur. 337. Cg. 1,979 ft.

Ed Mays No. 2 Dickens, Blk. 11, Sur. 1,107. Sd. 1,983-98 ft.; comp.; 50 B.P.D.; T.D. 1,998 ft.

Mills Bennett Prod. Co. No. 1 Despain. 40-ac. tr. Set csg. 1,999 ft.; comp.; no gauge.

Mills Bennett Prod. Co. No. 4 Garcia, 80-ac. tr. Sur. 786. T.D. 2,000 ft.; swbg.

Lopez—Webb-Duval Counties

C. H. Andrus No. 1 Billings, Sur. 10. R.U.

O'Hern—Webb County

Magnolia Pet. Co. No. 32 Benavides, sec. 13, Sur. 174. Sd. 2,854-67 ft.; comp.; 100 B.P.D.; csg. set at 2,854 ft.

Sun Oil Co. No. 12 Benavides, Blk. 509. Drlg. 2,607 ft.

Oilton—Webb County

Bridwell Oil Co. No. 2 Martin, Sur. 2167. Comp.; 202 B.P.D.; sd. 1,927-31 ft.

Bridwell Oil Co. No. 3 Martin, 60-ac. tr., Sur. 2167. Sd. 1,906-13½ ft.; comp.; 147 B.P.D.; 7-in. at 1,906 ft.

Gypsy Oil Co. No. 7 Martin, Sur. 458. T.D. 1,895 ft.; comp.; 320 B.P.D.; ½-in. ck.; 5½-in. csg. at 1,880 ft.

Gypsy Oil Co. No. 8 Martin, Sur. 458. Sd. 1,911-22 ft.; comp.; 165 B.P.D.; T.D. 1,922 ft.

Gypsy Oil Co. No. 9 Martin, Sur. 458. Comp.; 131 B.P.D.; ½-in. ck.; T.D. 1,919 ft.

Hamil & Smith No. 3 Martin, sec. 337. R.U.

Mills Bennett Prod. Co. No. 1 Martin, sec. 458. R.U.

Porter & Blanchard No. 1 Laurel, Sur. 1006. Set csg. 1,930 ft.; W.O.C.

Rowen & Hope No. 2 Laurel, Sur. 1,006. Comp.; est. 150 B.P.D.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 2 Yturria, Sh. 64, Carricitos Gr. Cg. sdy. sh. 5,778 ft.

Byersville—Williamson County

A. C. Schramm No. 1 Zieschang, Hamilton White Sur. Set csg. 859 ft.; W.O.C.; comp.; 1 B.P.D.; on pmp.

Escobas—Zapata County

B. W. Roscoe No. 20 Bustimante, Sh. 33. Comp.; 22 B.P.D.; sd. 1,208-18½ ft.; T.D. 1,229½ ft.

B. W. Roscoe No. 29 Bustimante, Sh. 33. T.D. 1,260 ft.; comp.; 20 B.P.D.

Texas Co. No. 107 Jennings, Cerrito Blanco Gr. Drlg. lig. and sh. 1,227 ft.

NORTH TEXAS WILDCATS

Archer County

Burk Roy. Co. No. 1 J. B. Miller, sec. 20, A.T.N.C.L. Sur. Spdg.

Hamon, Hanlon-Buchanan, Inc., et al No. 1 W. P. Ferguson, sec. 2, H.&G.N. Sur. Drlg. 3,500 ft.

Baylor County

Golding & Cochran No. 1 Louis Hencirik, sec. 5, B.B.B.&C. Sur. Drlg. 1,400 ft.

Hampton et al No. 1 A. G. Cochrell, sec. 2,404, T.E.&L. Sur. Drlg. 1,000 ft.

Clay County

Bridwell Oil Co. No. 2 H. Boddy, E. Humphries Sur. A-195. Drlg. 1,910 ft.

W. Gant No. 5 C. M. Worsham, D.L.&C.A. Sur. 1,073. Drlg. 2,850 ft.

T. E. Seigler No. 1 G. W. Scaling, G. F. Bridgeman Sur. A-40. Drlg. 835 ft.

Cooke County

Benton & Holmes No. 1 Gibson, J. English Sur. A-345. Fsg. 3,700 ft.

Seitz, Comegy & Seitz No. 1 W. A. Erwin, B.B.B.&C. Sur. A-162. Drlg. 1,150 ft.

Denton County

B. Bender et al No. 1 A. Dyer, J. Gilbert Sur. A-451. Spd. and S.D.

W. C. Curry et al No. 1 G. F. Owens, N. Rudder Sur. A-1060. Drlg. 385 ft.

Bruce Lee No. 1 Boyles, S. Ross Sur. A-112. Drlg. 1,250 ft.

Miller Bros. No. 1 D. H. Luster, F. Trevino Sur. A-121. Fsg. 2,000 ft.

Scroggins et al No. 1 S. M. Freeman, Bradshaw Sur. A-104. S.D.O. 1,900 ft.

Wilcox O. & G. Co. No. 1 D. W. Light, M. V. Sur. Drlg. 2,750 ft.

Foard County

O. P. Burnham No. 1 Ward, sec. 21, H.& T.C. Sur., Blk. 8. Drlg. 2,050 ft.

Grayson County

Denver P. & R. No. 1 Cannon, A. Berry Sur. A-130. D.D. Drlg. 3,140 ft.

Montague County

J. W. Sorrell et al No. 1 J. E. Waithall, S. H. Smith Sur. A-662. S.D. 2,000 ft.

Ventex Investments, Ltd., No. 1 S. E. Bell sec. 11, M.E.P.&P. Sur. Reps. to boiler 3,390 ft.

Wichita County

W. B. Hamilton No. 1 Mrs. M. Parker, M. Ramsey Sur. A-471. M.I. new spudder; T.D. 810 ft.

Lebus No. 1 J. F. Miller, W. R. Eaves Sur. A-447. Drlg. 3,350 ft.

W. B. Omohundro No. 1 First Natl. Co., sec. 28, W.V.F.L. Sur. Drlg. 1,785 ft.

Patterson et al No. 1 B. C. Ellis, J. Waldschmidt Sur. A-792. Drlg. 930 ft.

Felix Payne No. 1 P. R. Pace, R. J. Scott Sur. A-253. Loc.

E. J. Stump No. 1 M. P. Bishop, L. Netherley Sur. A-240. Set surface pipe; W.O.R.

E. J. Stump et al No. 1 J. and J. Waggoner, W. R. Eaves Sur. A-753. Drlg. 3,510 ft.

Clyde Texan Oil Fields Co. No. 1 A. W. Burnside, John M. Sharp Sur. A-262. Drlg. 800 ft.

Wilbarger County

Barry & Hayes No. 1 McGill, sec. 3, Blk 9, H.&T.C. Sur. U.R. 10-in.; drlg. 2,750 ft.

King Oil Co. No. 1 R. L. Castleberry, sec. 68, H.&T.C. Sur., Blk. 14. Drlg. 1,300 ft.; S.D.

W. W. McDonald No. 3 Waggoner A. sec. 26, H.&T.C. Sur. Testing lime 3,638-54 ft. with acid; P.B. and tstg. S.S.O. 3,-117-25 ft.

Wise County

W. D. Dilbeck No. 1 J. I. Wilkins, E. Stephens Sur. S.D. 600 ft.

Latex Oil Co. No. 1 C. R. Smith, J Couch Sur. A-104. Showing gas 3,843-45 ft.; 6⅝-in. 3,843 ft.; W.O.C.

Young County

F. W. Bennett No. 2 R. V. Tidwell, J. L. Blackwood Sur. A-1,378. Drlg. 3,000 ft.

Eppenauer Drlg. Co. No. 1 J. B. Hazelton J. Harmon Sur. A-1607. 5⅛-in. at 4,196 ft.; W.O.C.

T. D. Humphrey No. 1 S. R. Ragland T. B. Kuykendall Sur. 6⅝-in. at 3,770 ft.; W.O.C.

L. A. Long No. 1 F. A. Burnett, E.G. Rector Sur. No. A-239. 3,700 ft.; S.D.

Lupton & Long No. 1 W. L. Gilmore, J. Gilmore Sur. A-2,135. Drlg. 3,375 ft.

W-K Royalty Co. No. 1 J. A. Wright, J. N. Taylor Sur. A-1,243. Drlg. 2,500 ft.

E. C. TEXAS WILDCATS

Angelina County

John Coates No. 1 J. L. Russell, 300 ft. E line and 150 ft. N of W 50 of N 100 acres in Jose Morino Sur., E of Diboll. Drk.

Bowie County

McKenzie et al No. 1 Lumpkin. Drlg. 5,400 ft.

Cherokee County

J. K. Hughes No. 1 I. S. Foster, 330 ft. S and E of J. Mata Sur., but in C. E. Gary Sur., SE of Kirvin. R.U.

Merica Oil Co. No. 1 Cherokee Dev. Co., A. J. Acker Sur., 2 mi. E of Maydelle. M.I.M.

E. H. Moore, Inc., No. 1 Chronister Lbr. Co., 60 deg. W 5,616 ft. and N 1,225 ft. from SE cor. of Tr. 71, Blk. 33, John Durst Gr., 15 mi. SE of East Texas field. Loc.

Fannin County

Stewart Drlg. Co. No. 1 N. Young, S. H. Hitchcock Sur., 1 mi. W of Randolph, W. of Glazier & Trippe No. 1 Young dry hole; cg. 2,700 ft.

Freestone County

Holt et al No. 1 W. H. Chambers, W. D. Allison Sur., 2¾ mi. N of Keechi 5,200-ft. test. El. 426 ft. Pecan Gap 2,990-4,-690 ft.; drlg. 5,892 ft.

C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.

Gregg County

Humble O. & R. Co. & Gulf O. Corp. No. 1 E. Robertson, M. Mann Sur., 2½ mi. SW of Longview Trinity test. El. 272 ft.; Austin 3,329-71 ft.; top sand 3,371 ft.; fsg. 3,647 ft.

Henderson County

American Liberty Oil Co. et al No. 1 LaRue & Johnson, Blk. 11, P. Jackson Sur., 2 mi. W of LaRue. El. 464 ft.; top Georgetown 5,540 ft.; drlg. 5,773 ft.

S. Hunt et al No. 1 Dillard, 330 ft. S and E of S 160 of N 270 of 640 acres in H. Jeffries Sur., 16 mi. N of Trinidad. R.U.

Wm. McDougall No. 1 Trinity, F. & S. Land Co., Blk. 1, H.&T.C. Sur. Drk.

Tide Water Assoc. et al No. 2-C McElreath & Suggett, W. P. Wyche Sur. Top Glen Rose 6,282 ft.; drlg. 8,939 ft.

Hopkins County

V. A. Hughes No. 1 B. and T. Hardaway, 2,000 ft. S and 200 ft. E of Wm. A. Irwin Sur., 3 mi. E of Ridgeway. Loc.

Houston County

American Liberty No. 2 J. A. Bean, W. Burke Sur., 1 mi. N of Grapeland, approx. 2,200 ft. E of No. 1. Drlg. 5,226 ft.

Ridgeway-Jackson No. 2 H. F. Moore, H. Master Sur., 2 mi. SE of Crockett. M.I.M.

Leon County

Kelly & Fox No. 1 Bryant, A. M. Coultern Sur., 1 mi. E of Marquez. S.D.

Limestone County

Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. Drlg. 7,288 ft.

Stanolind O. & G. Co. No. 1 T. Norris, in Thresher Sur., 5 mi. N of Kosse: 6,500-ft. test. El. 528 ft.; S.D. 2,870 ft.

Morris County

J. O. Whittington No. 1 Joiner Leasing Co., T.C.R.R. Sur. No. 734, 8 m. NW Naples. Woodbine 3,490 ft.; Georgetown 4,089 ft.; drlg. 4,727 ft.

Nacogdoches County

G. C. Collier and Corley No. 1-A A. T. Mast, 14 mi. SW of Nacogdoches, T. S. Lambert Sur., 750 ft. N of No. 1. R.U.

Navarro County

Mrs. Jane Robinson No. 1 Fortson Bros., Eli Smith Sur., 5 mi. NE Corsicana. S.D. 10 ft.

T. Sharpe et al No. 1 E. B. McDowell, T. Jordan Sur., ½ mi. S of Bassets. Drlg. 2,750 ft.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 900 ft.

Cosby, Inc., No. 1 Hocker & Hughes, southern part of county. Top Woodbine 2,853 ft.; S.D. 2,880 ft.

Rusk County

J. Merrick et al No. 1 Tipps, T. Uzzell Sur., 6 mi. S of East Texas field. S.D. 3,888 ft.

J. W. Shipman et al No. 1 Citizens Bank J. J. Y'Barbo Sur., 4 mi. NE of Henderson. S.D. 4,500 ft.

Van Zandt County

P. E. Hill No. 1 J. L. Chitty, M. Neal Sur., 12 mi. S of Canton. S.D. 1,760 ft.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co. No. 5 Maxie, John Collom Sur. Drlg. 1,950 ft.

Bay Oil Corp. No. 2 Geo. Parker, G. Crowder Sur. Comp.; flw. 100 P.B.D.; T.D. 6,097 ft.

Bay Oil Co. No. 2 Geo. Parker, G. Crowder Sur. Comp.; flw. 65 B.P.D.; T.D. 6,043 ft.

R. W. Norton No. 2 Hussey, P. Evans Sur. Rng. 6-in. csg. 5,923 ft.

United Prod. Co. No. 4 Allday, P. Evans Sur. T.D. 6,016 ft.; tstg.

United Prod. Co. No. 4 Belote, H. Holbert Sur. Drlg. 2,544 ft.

United Prod. Co. No. 7 Bewley, H. Holbert Sur. Drlg. 4,967 ft.

United Prod. Co. No. 1 fee, H. Holbert Sur. T.D. 6,070 ft.; shot and tstg.

United Prod. Co. No. 2 fee 575, B. Holms Sur. Drlg. 5,800 ft.

United Prod. Co. No. 1-A Starke, D. Gilliam Sur. Tstg. dry; S.D.; W.O.; T.D. 6,050 ft.

United Prod. Co. No. 2-A Starke, D. Gilliam Sur. Comp.; flw. 153 B.P.D.; T.D. 6,040 ft.

Harrison County

J. B. Bond et al No. 1 Bailey & Martin, Geo. Martin Sur. Drlg. 5,790 ft.

Marion County—Rodessa

Arkansas-Louisiana Gas Co. No. 2 Emma Ford, A. D. S. Coy Sur. Drlg. 2,078 ft.

Arkansas-La. Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Sur. Acidized; T.D. 6,-150 ft.

Ark.-La. Gas Co. No. 1 Wade Houston, A. D. S. Coy Sur. Drlg. 1,612 ft.

Fohs Oil Co. No. 1 W. T. Neilon, R. Bennington Sur., R.U.

Fohs Oil Co. No. 2 M. Reynolds, A. D. S. Coy Sur. Drlg. 5,749 ft.

Holcomb & Thomasson No. 1 Gray-Taylor, A. D. S. Coy Sur. Drlg. 2,010 ft.

Mid-Continent Pet. Corp. No. 2 Sory, A. D. S. Coy Sur. Comp.; flw. 10 B.P.H.; T.D. 6,108 ft.

Mid-Continent Pet. Corp. No. 3 Sorry, A. D. S. Coy Sur. Drlg. 6,057 ft.

Hunter Co. No. 3 Fonda, A. D. S. Coy Sur. P.B. and W.O.C.S.; T.D. 6,125 ft.

Shell Pet. Corp. No. 1 L. Henderson, R. Bennington Sur., Lot 8. Drlg. 5,175 ft.

United Prod. Co. No. 2 Hutchinson, A. D. S. Coy Sur. Drlg. 5,553 ft.

United Prod. Co. No. 3 Hutchinson, A. D. S. Coy Sur. Drlg. 1,900 ft.

United Prod. Co. No. 4 Hutchinson, A. D. S. Coy Sur. Drlg. 1,100 ft.

Panola County

Danciger O. & G. Co. No. 1 Tatum, A. Bissell Sur. Drlg. 5,722 ft.

Magnolia Pet. Co. No. 2 E. A. Hull, Thos Applewhite Sur. Drlg. 8,250 ft.

WEST TEXAS WILDCATS

Andrews County

American Liberty O. Co. No. 1 E. Cowden sec. 14, Blk. A-55, P.S.L. Sur. S.D. 5,002 ft.

M. J. Delaney No. 1 E. P. Moore, sec. 12, Blk. A-20, P.S.L. Sur. T.D. 4,579 ft., S.I.

M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. S.D. 179 ft.

Gulf Oil Corp. No. 1 State, sec. 8, Blk. 14. W.O.C. 250 ft.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 66, League 182, Floyd Co. School Lands Sur. S.D. 1,970 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 6,001 ft.; U.R. csg.

Storey No. 1 Wilson, sec. 3, Blk. 212, T.& St.L. Sur. S.D. 2,545 ft.

Cochran County

Texas Co. No. 1 Slaughter. Drlg. 4,776 ft.

P. N. Wiggins et al No. 1 Dean, NE cor. League 58, Martin Co. School Lands. Drlg. 3,333 ft.

Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 26, League 92 Lipscomb Co. Sch. Ld. T.D. 5,030 ft.; ran tbg. to acidize.

Concho County

Sam Murray No. 1 R. G. Armor, 1,315 ft. S and 330 ft. W, sec. 105, T.&N.O. Sur. Loc.

Coke County

Barnett Pet. Co. No. 1 J. R. Mims, 330 ft. S and E, sec. 39, Blk. W, T.&P. Sur. Loc.

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. B-21. S.D. 515 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. T.D. 5,404 ft.; P.B. to 3,210 ft.

Wilcox O. & G. Co. No. 1 McKnight, sec. 9, Blk. 46, Twp. 3s, G.M.M.B.&A. Sur. S.D. 4,500 ft.

Crockett County

Moore Bros. No. 1 P. Perner, sec. 37, Blk. 2, I.&G.N. Sur. S.D. 1,610 ft.

J. N. Simpson No. 1 Hoover, sec. 2, Blk. FF, G.C.&S.F. Sur. R.U.S.T.

Dawson County

R. Albaugh No. 1 D. Hogg, SE of SE sec. 17, Blk. 34, Twp. 4n, T.&P. Sur. W.O.C. 3,560 ft.

E. L. Wilson No. 1 Scanlon, Sec. 83, Blk. M, E.L.R.R. Sur. S.D. 4,965 ft.; P.B. to 4,933 ft.; pmpd. 5 B.P.H. then decreased.

Dickens County

C. E. Litchfield No. 1 Harris, sec. 354, Blk. 1, H.&G.N. Sur. S.D. 1,500 ft.; no report.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1½ mi. E of Rock Springs. S.D. 700 ft.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. Drlg. 4,146 ft.

Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. Cg. 4,338 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkle. Drlg. 3,061 ft.

Fisher County

Bond Oil Corp. No. 1 N. Bertram, 1 mi. S of Sylvester. Drlg. 679 ft.

Consolidated Oil Co. et al No. 1 Florida. Drlg. 2,175 ft.

Gaines County

Amerada Pet. Corp. No. 1 Matthews, sec. 417, Blk. G, C.C.S.D.&R.G.N.G. Sur. T.D. 5,018 ft.; P.B. to 5,008 ft.; S.I.

Continental Oil Co. No. 2 Jones, sec. 1, Blk. A-8, P.S.L. Sur. Cellar.

R. H. Gill No. 1 S. R. Simpson, sec. 8, Blk. C-44, P.S.L. Sur. Drlg. 4,702 ft.

Hockley County

Frank A. Bates No. 1 Lockett, C of NE

Oil Man's Calendar

September

22-24—Erie, Pa., A.S.M.E. meeting.
24-25—Traverse City, Mich., Michigan Petroleum Association.
27—State College, Pa., Credit Men's Association, Petrolum Groups, Eastern Pennsylvania and Pittsburgh.
29-30—Cleveland, Ohio, Ohio Petroleum Marketers Association, Fall Conference, Hotel Carter.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.
27-Oct. 1—Cleveland, Ohio, American Gas Association, nineteenth annual convention.
30-Oct. 1—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

4-5—Chicago, Ill., National Lubricating Grease Institute, fifth annual convention, Blackstone Hotel.
5—Kilgore, Tex., East Texas Chapter, American Petroleum Institute.
6-7—Cleveland, Ohio, Ohio Petroleum Marketers Association, Hotel Carter.
7-8—Oklahoma City, fall meeting of Petroleum Division of A.I.M.E., Hotel Biltmore.
7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.
11-15—Kansas City, Mo., Twenty-sixth National Safety Congress and Exposition.
11-16—Houston, Tex., Oil-World Exposition.
12-14—Chicago, Ill., National Oil Marketers Association Convention, Stevens Hotel.
14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.
14-15—Houston, Tex., Interstate Oil Compact Commission, Rice Hotel.
14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.
18-22—Atlantic City, N. J., American Welding Society, Eighteenth Annual Meeting and Welding Exposition.
27—Shreveport, La., Louisiana-Arkansas division, Mid-Continent Oil and Gas Association, membership meeting Slattery, Building.
27-28—Indianapolis, Ind., Indiana Independent Petroleum Association, Annual Fall Convention, Hotel Severin.
28—New York, S.A.E. Annual Dinner, Commodore Hotel.
29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show, Grand Central Palace.

November

8-12—Chicago, American Petroleum Institute, Eighteenth Annual meeting, Stevens Hotel.
16—New York, Oil Trades Association of New York.
19—Tulsa, Mid-Continent Oil and Gas Association membership meeting, Tulsa Club.

December

6—Memphis, Tenn., National Asphalt Congress.
6-11—New York, Exposition of Chemical Industries, Grand Central Palace.
8-10—Flint, Mich., S.A.E. National Production Meeting.
14—Tulsa, annual meeting of directors of Mid-Continent Oil and Gas Association.

1938—March

16-8—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.

April

17-21—Dallas, Tex., American Chemical Society.

---

of S sec. 5, Blk. 1, P.S.L. Sur. Drlg. 4,756 ft.
Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37, Zavalla Co. Sch. Lds. Sur. T.D. 4,975 ft.; shot with 180 qts. 4,935-72 ft.; tstg.

Howard County

W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. Drlg. 380 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6, T.D. 3,080 ft.; drlg. out at 2,870 ft.
Haymon Krupp No. 1 Briggs, sec. 24, Blk. 73, Twp. 7, T.&P. Sur. Drlg. 320 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones-Coffield, S.D. 3,315 ft.

Loving County

Barnett Pet. Co. No. 1-A Johnson, sec. 2 Blk. 57, Twp. 1, T.&P. Sur. Drlg. 1,822 ft.
Barnett Pet. Corp. No. 1-B W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drlg. 1,700 ft.
Continental Oil Co. No. 1 E. C. Marrs, sec. 20, Blk. 54, Twp. 2, T.&P. Sur. Drlg. plug 1,925 ft.

Martin County

J. L. Green et al No. 1 O. B. Holt, C of Labour 20, Lge. 319, Garza Co. Sch. Lds. Drlg. 226 ft.

Mitchell County

Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. S.D. 3,157 ft.

Nolan County

M. S. Ingleright & L. E. Hults No. 1 Blank, Blk. 1-A, H.&T.C. Sur., near Decker, 4,000-ft. test. Drlg. 723 ft.

Pecos County

K. Kimberlin No. 1 Humble-Young, sec 49, Blk. 10, H.&G.N. Sur. S.D. 1,800 ft.
S. Thompson No. 1 Elsinore Cattle Co sec. 54, Blk. D, G.C.&S.F. Sur. To whipstock.
Trans-Pecos Oil Co. No. 1 Popham. T.D 535 ft.; lost hole; skd. 25 ft. south; drlg. 875 ft.
W. K. Tuller No. 2 Perry. T.D. 1,920 ft. shot; C.O.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. Fsg. 4,375 ft.
Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. Drlg. 2,252 ft.
Moore Bros. No. 1 University, sec. 8, Blk 7. S.D. 2,860 ft.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah Fsg. 1,400 ft.

Runnels County

Hall Oil Co. No. 1 Beddo, sec. 51, Thompson Casey Sur. Drk.
K Z Oil Co No. 1 B. Fletcher, E. C. Gooc Sur. S.D. 3,250 ft.
Stevens & Glover No. 1 Fowler, sec. 154 E.T.R.R. Sur., 2 mi. NE of Ballinger T.D. 1,095 ft.; S.D.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. S.D. 4,550 ft.
Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. T.D. 3,133 ft.; U.R. csg.

Scurry County

C. W. Guthrie et al No. 1 F. W. Hardee sec. 99, Blk. 97, H.&T.C. Sur. S.D.
Robinson Drlg. Co. No. 1 Martin, sec. 147, H.&T.C. Sur. Drlg. 505 ft.

Sterling County

Wilcox O. & G. Co. No. 1 Kinnebrew Est., sec. 101, Blk. 2, H.&T.C. Sur. S.D. 1,235 ft.
Snowden & McSweeney No. 1 Harris, sec. 110, Blk. 6, H.&T.C. Sur., 20 mi. SE of Sterling City. M.I.M.

Sutton County

Ordovician Oil Co. No. 1 Evans, sec. 1, L. Stubblefield Sur., 32 mi. SE of Sonora. Drlg. 2,270 ft.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. S.D. 5,245 ft.
R. L. Foree No. 1 A. E. Pool, sec. 54, Blk. D-11, D.&S.E. Sur. Drlg. 5,340 ft.

Tom Green County

Humble O. & R. Co. No. 1 Lewis & Wardlaw, 1,980 ft. S and 660 ft. E, sec. 5, Blk. 17, H.&T.C. Sur. Loc.

Upton County

Maverick Oil Co. No. 1- Holmsley, sec. 16, Blk. B, C.C.S.D.&R.G.N.G. Sur., 14 mi. NE of Rankin. S.D. 4,042 ft.

Ward County

L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft.; T.D. 4,710 ft.; testing.

Yoakum County

Bohago & Bond No. 1 West, sec. 606, Blk D. T.D. 5,255 ft.; flwd. 44 B.P.D. through 27/64-in. ck.
Denver Dev. Co. No. 1 Whittenburg, sec. 831, Blk. D, J. H. Gibson Sur. T.D. 5,001 ft.; S.I.
J. L. Green No. 1 Bartlett, NE¼ sec. 359, Blk. D, 12 mi. W of Plains. Loc.
J. L. Greene et al No. 1 Nevels, 660 ft. N and E of SE, sec. 709, Blk. D. Loc.
Moore Bros. No. 1 Cleveland, sec. 706, Blk. D, J. H. Gibson Sur. T.D. 5,506 ft.; P.B. to 5,328 ft.; bailing.
Skelly and Sun Oil Co. No. 1 Kiser, 660 ft. N and E of sec. 640, Blk. D. Loc.
Standard of Texas No. 1 M. B. Sawyer, sec. 576, Blk. D, J. H. Gibson Sur. Drlg. 4,348 ft.
L. Stogner et al No. 1 J. A. Blade, 660 ft. N and E, sec. 103, Blk. D. Loc.
Texas Co. No. 1 Walker, sec. 794, Blk. D El. 3,656 ft.; T.D. 5,180 ft.; P.B. to 5,162 ft.; to shoot, acidize and test.
P. N. Wiggins et al No. 1 Bartlett, sec. 359, Blk. D. S.D. 150 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

C. R. Cox, Tr., No. 1 Jan Lee, sec. 11, B.B.B.&C. Sur., NE cor. county. S.D. 240 ft.
R. A. J. Cox et al No. 1 H. A. Nichols, 10 mi. SE of Cross Cut, F. Wardsziski Sur., sec. 477. Drlg. 1,100 ft.
W. T. Daniels et al No. 1 Joyner, 1 mi. S Brownwood, T. Smith Sur. No. 600, Abst. 821. Drlg. 1,610 ft.
Garland Moore et al No. 1 T. S. Williams, 1 mi. NE Grosvenor. Sec. 40, H.T.&B. Sur., Abst. 2037. Spdg. & S.D.

Callahan County

Hal Hughes No. 1 Poindexter, 330 ft. fr. N&E of sec. 350, Geo. Hancock. Sur. 2 mi. NE of Oplin. S.D. for water.
J. C. Jackson et al No. 1 Thompson, 2 mi S Eula, sec. 30, B.B.B.&C. Sur. U.R. 6⅝-in. 1,350 ft.
Phillips Pet. Co. No. 1 Cozart, 1 mi. NW Scranton, M. Cherry Sur. R.U.

Coleman County

J. F. Brock No. 1 J. H. Livingston, SE cor. SW¼ county, J. D. Waters Sur. No. 208. Spud and S.D.
Roy H. Denhart No. 1 James, 1 mi. NW of Trickham, 200 ft. from S and W lines of Sarah McElreath Sur., Abst. 1727. Drlg. 1,880 ft.
Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 repts.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. L. Terry, Desdemona pool, N. H. Kuykendall Sur. T.D. 4,195 ft.; U.R. 8¼-in.
Dobbs Oil Co. No. 1 Hodges, sec. 11, Blk. 2, H.&T.C. Sur. S.D. 220 ft.

Eastland County

G. D. Chastain et al No. 1 Weddington, 4 mi. N Cisco, sec. 496, S.P.R.R. Sur. Drlg. 1,250 ft.
Hickok Prod. & Dev. Co. No. 1 Van Parmer, NW cor. county, sec. 477, S.P.R.R. Sur. Drlg. 725 ft.
J. D. Kittrell No. 1 Reynolds, 5 mi. E of Carbon, sec. 23, H.&T.C. Sur., Blk. 1. S.D. 600 ft.
Monark O. & G. Co. No. 1 Downtain, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. Drlg. 1,940 ft.

Erath County

Arnold Oil Co. No. 1 McMillan, 2 mi. SE of Desdemona, T. H. Dixon Sur., Abst. 1103. S.D. 160 ft.

Haskell County

E. W. Marland & H. B. Drake No. 1 Corothers, 6 mi. S Haskell, sec. 67, D. E. Zaaz Sur. Drlg. 2,600 ft.

Jack County

Bennett Pet. Corp. No. 1 J. S. Rhodes, 2½ mi. NE Bryson, W. Higgins Sur., Abst. 2,199. Loc.
J. P. Burrus No. 1 W. J. Eatherly, J Helmstutler Sur. T.D. 1,200 ft.; S.D.
Hanlon-Buchanan, Inc., No. 1 Rankin, 2 mi. NE Rhodes pool, J. W. Matlock Sur., Abst. 1479. Drlg. 2,200 ft.
Hanlon-Buchanan, Inc., No. 1 Worthings, E edge Avis, S.A.&M.G. Sur., Abst. 589. S.D. 1,155 ft.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. S.D. 3,000 ft.
Nelson Oil Synd. No. 1 Henderson, 2 mi. SW Bryson, A. S. Ensworth Sur., Abst. 1789. T.D. 3,002 ft.; C.O.
Panhandle Ref. Co. No. 1 D. R. Sewell, 4 mi. E of Bryson, Mary Hamilton Sur., Abst. 262. Sd. 3,049-62 ft.; shot with 10 qts.; fsg. tools.
Taubert & McKee No. 1 Eatherly, 3 mi. NW of Gibbtown, SE cor. county, 330 ft. S and 330 ft. W of SE cor. R. Carson Sur., Abst. 766, but in J. H. Henderson Sur., Abst 1749. Spd. and S.D.
F. A. Westbrook No. 1 W. Knox, sec. 83, B.B.B.&C. Sur. Drlg. 3,775 ft.
Joe Worsham et al No. 1 Cash, 3½ mi. NE of Bryson, I. White Sur., Abst. 895. S.D. 3,210 ft.

Jones County

Brown Eagle Oil Co. et al No. 1 Glaze, 2 mi. E. Hawley, Subd. 5, R. Smith Sur No. 192. Drlg. 2,340 ft.
E. P. Campbell No. 1 Minter, 4 mi. N Hawley, sec. 26, T.&P. Sur., Blk 15. Drlg. 2,400 ft.
Chartier O. & G. Co. No. 1 City of Stamford, S edge Lueders. O.W.D.D.; 2,700 ft. from E line and 2,400 ft. from S line of Blk. 18, F. Lueders Sur. Prep. to D.D.
Fain & McGaha Oil Corp. No. 1 Akens, 3 mi. SW Hawley, sec. 18, T.&P. Sur., Blk. 16. T.D. 1,785 ft.; C.O.
Fain & McGaha Oil Corp. No. 1 Francis Olson, 3 mi. NE Avoca, sec. 190, B.B.B. &C. Sur. Drlg. 900 ft.
Fain & McGaha Oil Corp. No. 1 Minter, 3 mi NW Hawley. Lot 12, Robt. Smith Sur. No. 192. Drlg. 2,200 ft.
Fain & McGaha Oil Corp. No. 1 J. H. Wheeler, 3 mi. NW Sandy Ridge pool sec. 55, O.A.I. Sur. T.D. 2,302 ft.; U.R. 6-in.
Farris & Ungren & Frazier No. 1 Ida Nolan, 2 mi. E of Stamford, 440 ft. from S and E of NW¼ sec. 3, B.B.B.&C. Sur. Mach.
Iron Mountain and Humble No. 2 Jones & Stasney, 3 mi. NE of Avoca, sec. 196, B.B.B.&C. Sur. Loc.
M. A. Mead No. 1 H. Osment, S.D. 500 ft.
Murray & Harrison et al No. 1 Little, 3½ mi. NE Avoca, sec. 172, B.B.B.&C. Sur. Drlg. 2,615 ft.
Oil States Expl. Co. No. 1 Olson, 4 mi. N Avoca, sec. 182, B.B.B.&C. Sur. Loc.
W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. S.D. 2,085 ft.
Ridge et al No. 1 D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. S.D. 2,475 ft.
Roeser & Pendleton No. 1 Rosenquist, 4½ mi. NE of Avoca, sec. 181, B.B.B.&C. Sur. Drlg. 800 ft.
Shaheen Oil Co. et al No. 1 Jenson, 2 mi. E of Avoca, sec. 198, B.B.B.&C. Sur. S.D. 1,225 ft.
Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. S.D. 2,475 ft.
Southern Oil Co. No. 1 B. W. Thane NE cor. County. Andrew Jones Sur. 114. Drlg. 1,700 ft.
Stanton & Miller No. 1 Gaither, 4½ mi. N of Anson, 330 ft. from N and W lines of sec. 38, B.B.B.&C. Sur. Drlg. 300 ft.
S. G. Swanson No. 1 Manley, 7 mi. S Nugent, sec. 46, T.&P. Sur., Blk. 14. S.D. 1,610 ft.
Felmont & Adams No. 1 Woodson, 1½ mi. SE Avoca, sec. 200, B.B.B.&C. Sur. M.I.
Ungren & Frazier et al No. 1 Carl Ecdahl, 3½ mi. NE Avoca, sec. 188, B.B.B.&C. Sur. Drlg. 900 ft.
Ungren & Frazier No. 1 Melton, 4½ mi. SW Hawley, John Winters Sur. U.R. 8¼-in. 2,140 ft.; T.D. 2,253 ft.; U.R. 6-in.
Ungren & Frazier & West No. 1 Southard, 3 mi. SE Avoca, sec. 202, B.B.B. &C. Sur. T.D. 1,630 ft.; U.R. 10-in.
C. E. Waite, Trust, No. 1 Ray, 3½ mi. SE of Stamford, 330 ft. from N and E of NW¼ sec. 7, D.&D.A. Sur. Loc.

Palo Pinto County

W. H. Clement No. 1 Federal Life Ins. Co., 2 mi. W Mineral Wells, sec. 51,

(Continued on Page 122)

Canadian Fields

(Continued from Page 101)

Moose Oils No. 2, LSD 8, section 29-22-6w5, bottoming at 1,533 feet in the Devonian lime, is flowing considerable crude through 2-inch tubing into the storage tanks. The formation was treated with 1,000 gallons of acid, part of which appears to be still in the hole. Production is estimated between 75 and 100 bbls. a day. The well may be put on the pump, when increased production is expected. The crude is around 46 gravity, and similar to the Turner Valley product. The company is planning to drill additional wells on the structure.

East-Central Alberta

On the Battleview anticline in East-Central Alberta, Battleview Oils No. 1, NW section 32-47-5w5, bottoming at 1,894 feet, started bailing when heavy gas pressure developed, blowing 1,400 feet of rotary mud out of the hole. A big gas flow developed, estimated as high as 50,000,000 feet a day, accompanied by some crude. The gas was thought to be wet, and arrangements are being made to install a separator. In drilling, gas shows were met at 1,424, 1,625 and 1,710 feet with the main sand at 1,870 feet. Below this depth a 24-inch core was taken, showing heavy saturation. The oil is a light brown crude. Following a production test, the hole may be deepened about 160 feet to what is considered the main potential sand.

Kentucky Fields

(Continued from Page 77)

Salt sand in No. 3 on the R. C. Kilgore farm nearby. Inland is building rig for No. 1 Mayo Craft also on Right Fork of Troublesome Creek.

The Kentucky-West Virginia Gas Co. was drilling at 1,755 feet in No. 553 on the Isom Gibson land and is down 1,856 feet in No. 554 Red Rock on the Lark Slone land on Jones Fork. Kentucky-West Virginia is down 1,800 feet in Salt sand in No. 5228 on the Nancy Johnson land on Caney Fork.

Martin County

Kentucky-West Virginia Gas Co. is drilling at 1,315 feet in No. 556 on the John M. Layne land in Martin County, with operations continuing in lime. Kentucky-West Virginia is idle at wells No. 5226 and No. 5230 on the C. W. Preece farm on Coldwater Fork. Drilling has halted at No. 5227 on the same land at the 945-foot level in Salt sand.

Floyd County

The Inland Gas Corp. had reached the 982-foot level in well No. 1 on the Ollie M. Glenn heirs farm on Levisa Fork with drilling continuing in Salt sand.

WESTERN KENTUCKY

OWENSBORO, Ky., Sept. 20.—Fourteen wells were completed in the Western Kentucky fields in the past week of which eight were oil wells with a total initial production of 225 bbls. One gas well and five dry holes were included in the total of completed work.

A wildcat well, approximately three-quarters mile north of Cleopatra in McLean County, near the Daviess County line, is being drilled in by the Hoosier Drilling Co., showing 1 bbl. per hour natural flow from Barlow sand at 1,730-50 feet and not yet through the sand.

The Harry Watson leases in the Huntsville district in Butler County have been assigned to the United Gas & Oil Co. A well started on the Opal Hunter farm by Watson is shut down temporarily, according to word received from representatives of the new lease owners.

Hancock County

Easton district: J. C. Ellis No. 8 Hallie Mason, 10 bbls., Jett sand, 325-38 feet, shot with 60 quarts; No. 13 Thelia Richards, 50 bbls., Jackson sand; No. 9 Hallie Mason, spudding in. W. E. Hupp No. 4 Emma Poole, 10 bbls., Jackson sand, 480-93 feet, shot with 60 quarts. Bollinger and others No. 3 William McIntosh, drilling at 300 feet.

Pellville district: C. D. Walker No. 1 Marion Boling, 50 bbls., Jett sand, 324-54 feet, shot 80 quarts; No. 3 Ellen House, 30 bbls., Jett sand. Frank Damron and others No. 3 Fred Boling, 1,700,000 feet of gas, 170 pounds rock pressure, Jackson sand 530-56 feet; No. 3 and No. 4 Elsie Bates, spudding in. C. D. Walker No. 1 Elmer Boling, location. Charles Marsh and others No. 1 I. B. Barker, dry hole to top of little lime, no Jett sand, total depth 463 feet.

Victoria School district: J. H. Taulbee No. 2 Mitchell Freel, drilling at 295 feet.

Ohio County

Narrows district: George Lavigne and others No. 1 J. T. Schultz, dry hole, Barlow sand 611-22 feet. Staves Drilling Co. and others No. 3 M. E. Powers, light well in Jackson sand, around 500 feet, will shoot.

Friendship Church district: Joseph B. Myers and others No. 2 Tom Hamilton, drilling at 535 feet.

Westerfield district: Mrs. Rollins No. 4 Wilbur King, spudding in.

Taffy district: Frank Bondell and others No. 4 Ferdinand Taylor, spudding in; No. 5 M. S. Bartlett, dry hole through Jett sand, total depth 456 feet.

Buford district: Leper Oil Co. No. 1 Ernest Bartlett, dry hole through Bethel sand, total depth 1,020 feet.

Breckenridge County

Van Zandt district: J. C. Miller, trustee, No. 2 Whalen Heirs, spudding in.

Daviess County

Cane Run School district: J. C. Ellis No. 6 Lena Mayfield, drilling 200 feet.

Red Hill district: Pennsylvania-Indiana Oil Co. No. 16 First National Bank tract, 25 bbls., Jett sand.

Utica district: Daugherty & Ellis No. 2 C. W. Howard, dry hole through Jett sand, 1,112-42 feet and 1,163-66 feet, total depth 1,181 feet. Daugherty & Ellis No. 3 C. W. Howard, spudding in.

McLean County

Maxwell district: Ellis & Huff No. 2 John Ditto, shot, Stray sand, 915-945½ feet, 80 quarts, 25 bbls.

Livermore district: Culbreth and others No. 2 Hollis Howell, spudding in.

Island district: South-Penn Oil Co. No. 1 C. M. Markwell, Jett sand at 1,454 feet, no estimate on initial production, will shoot; No. 1 Mrs. Rena Brown, drilling at 1,700 feet.

Union County

Two and one-half miles north of Boxville, Clark & Snyder No. 3 Waller Young is rigging up.

Southwest Texas Fields

(Continued from Page 72)

sence of actual cores of the sand precluded setting casing on the sand. A second test of the immediate area is now being planned, to explore the Government Wells and Loma Novia sands, the location being determined by information gathered from the Speed and Standard of Texas wildcats, both located on the Gruy tract.

In the very north edge of the county, V. G. Schimmel tested gas in sand at 1,949-62 feet but is coring ahead. The wildcat, No. 3 Hagist is located south of the Loma Alta field, which lies across the line in McMullen County.

Webb County activity is restricted generally to the Killam-Oilton sector in the southeast part of the county. Both fields have several active tests, the Oilton field showing a little the better results so far as new oil production is concerned. In the latter field, six producers were completed during the week, the bulk of them owned by the Gypsy Oil Co. Escobas, O'Hern and Cole are other actively drilling locations in Webb and Zapata counties.

Lower Rio Grande

Activity in the Lower Rio Grande Valley is divided among Starr, Willacy and Hidalgo counties. In the latter section, the LaBlanca field is the scene of three tests. Dee Davenport is carrying Nos. 1 Hidalgo and 2 Swallow to the deep field sand, and The Atlantic Refining Co. is beginning a test, the No. 1 American Rio Grande.

To the east in Wilacy County, wildcatting is on the gain. The Shell Petroleum Corp. No. 2 Yturria is coring below 5,770 feet, in the La Sal Vieja field, and Magnolia Petroleum Co. is drilling No. 1 Armendiaz 27 miles northeast of Mercedes. A new company, La Sal Vieja Oil Corp. is moving in on a wildcat test on the Garcia Land & Cattle Co. lease, 7 miles north of the Shell operations.

Fault Line Zone activity failed to show any important discoveries during the week, but much field and wildcatting development is under way in Caldwell, Guadalupe and Bastrop counties. In the last named County the two wildcats that showed indications of new field discoveries are being reworked. R. Olsen No. 1 Murchison 1½ miles east of Cedar Creek, went dead after completion last week, and operators are going back in the hole to deepen and rework. In the same county, the Hantho-Nelson, Inc. No. 1 Litton drilled to a total depth of 2,517 feet in the Edwards lime, has plugged back to 2,138 feet to treat with acid and attempt completion.

California Fields

(Continued from Page 82)

good producing wells have been completed. Drilling operations in the Oxnard district of Ventura County have failed to find the possible new field as Oxnard Oil Co. has passed the 5,750-foot level in its wildcat in section 10-1-22 and Vaca Oil Co. is rotating ahead at 3,985 feet. The latter well showed several stands of mud and water on a formation test at 3,525-3,641 feet, but no oil or gas was recovered. Shell Oil Co. is expected to complete a new well in the deep 57 zone in the Ventura Avenue field within the next week or 10 days and Tide Water Associated Oil Co. should match this completion with another as its No. 137 Lloyd is drilling at 9,738 feet with 9⅝-inch casing cemented at 8,667 feet. Shell's potential producer is No. 35 Gosnell which is bottomed at 9,265 feet with 6⅝-inch water string landed at 9,180 feet. This well has 85 feet of oil sand logged and while this will yield a large flowing well the company may add some additional hole before making a final production test. This 57 zone was discovered by Tide Water Associated Oil Co. several years ago but only a few wells have been completed in it.

Two new wells were completed in the Santa Maria Valley field and two additional wells are scheduled for production tests within a few days. The new wells completed were No. 2 Fernandez of A. N. Macrate and No. 1 Moretti of Ohio Oil Co. No. 2 Fernandez was brought in flowing 1,980 bbls. of 17.5-gravity oil cutting 2.5 per cent mud and water through a 28/64-inch bean under a pressure of 200 pounds on the tubing and 500 pounds on the casing. Ohio Oil Co. No. 1 Moretti was completed pumping 161 bbls. of clean 16.6-gravity oil per day from 3,971 feet after the hole had been carried down to 4,057 feet and subsequently plugged back to the completion depth. Hancock-Bush interests should have No. 2 Hopkins on production within a few days as the 8⅝-inch water string has been landed and cemented at 3,183 feet. This well is bottomed at 3,430 feet and top of the productive Monterey was logged at 2,180 feet.

San Joaquin Basin

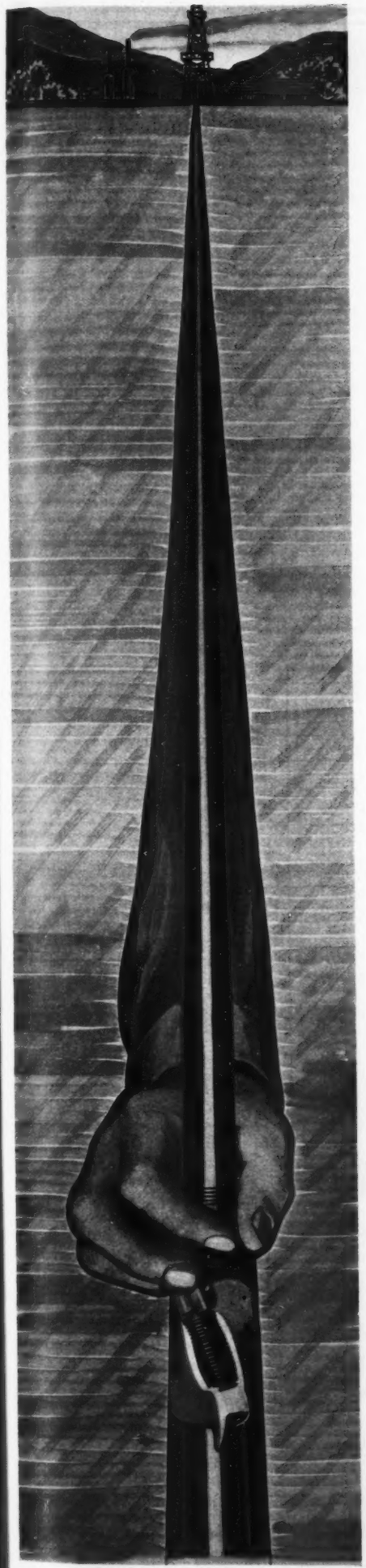
In the Fruitvale field of Kern County, Meridian Oil Co. completed No. 5 Turner, pumping 360 bbls. of clean 17.4-gravity oil per day from 3,043 feet. It was finished with 61 feet of 7-inch liner including 39 feet of perforated and 2,750 feet of 2½-inch tubing. Western Gulf Oil Co. is putting the finishing touches on two wells, No. 8 Red Ribbon in section 27-29-27 and No. 27-B Kern County Land in section 21-29-27. Out in the Kern Front section of the Kern River field, California Star Oil Co. completed No. 2-80 in section 22-28-27, pumping 192 bbls. of 13.6-gravity oil cutting 9 per cent daily from 2,650 feet and the crew from this well was moved to No. 3-80 in the same section. In the Round Mountain field of Kern County, Shell Oil Co. recompleted No. 1 Louis Olcese, pumping 15 bbls. of 16.4-gravity oil cutting 50 per cent from 1,760 feet. In its present state this well can not be considered as commercially productive and consequently some remedial work will be undertaken.

In the Mount Poso field Ring Oil Co. has concluded drilling operations on No. 1 Blackfoot at 1,810 feet, after having topped the productive Vedder zone at 1,780 feet. Dwight Vedder has finished drilling operations on No. 1 B. N. B. in section 32-26-28 at 1,691 feet with top of the Vedder logged at 1,634 feet. Both of these wells are in the productive area discovered by Ring Oil Co. several months ago north of the northern tip of the older Mount Poso field. Pacific Oil & Gas Co. abandoned its outpost in section 36-27-27 at 2,849 feet after finding the Vedder at 2,817 feet to be barren. Trico Oil & Gas Co. abandoned No. 1 Allen in section 20-26-28 as unproductive at 1,870 feet. Up in Fresno County, Pure Oil Co. has a rig up for a wildcat in section 31-17-17 about 15 miles northeast of Coalinga and drilling equipment is expected to be placed on ground within the next few days. Jacalitos Oil Co. is also starting a wildcat in Fresno County and the finishing touches are being put on a new rig in section 14-21-15, southeast of Coalinga. In Yolo County, Standard Oil Co. is abandoning No. 1 Cook at 2,389 feet in the Cretaceous.

Los Angeles Basin

In the Dominguez field of Los Angeles Basin, Union Oil Co. completed No. 54 Callender flowing 1,246 bbls. of 28.3-gravity oil per day from 7,697 feet. The output of this well, flowing through a 40/64-inch bean, is still cutting 8 per cent, but appears to be cleaning up and may get below the 3 per cent maximum cut for pipe lines. In addition to the amount of crude oil produced the well is making 1,209,000 feet of wet gas. Union Oil Co. has already started rig construction for No. 10 Carson an offset and this well should get under way within the next week. No. 50 Callender finished along about the same time as No. 54 has been completed flowing 685 bbls. of 27.9-gravity oil per day from 7,574 feet after the hole had been carried down to 10,435 feet for a deep test and subsequently plugged back to the completion depth. In the Huntington Beach field, Wilshire Oil Co. has completed No. 1-A H. B. doing 448 bbls. of clean 23.9-gravity oil per day from 4,935 feet after finishing the hole with a 6⅝-inch liner including 805 feet of perforated. It is bottomed beneath state tidelands and was drilled from the grass roots following abandonment of well No. 1 which developed pipe trouble.

In the erea east of the Playa Del Rey field of Los Angeles Basin Sharby Oil Co. is making a series of formation tests on its outpost in section 22-2-15. The well is bottomed at 7,464 feet and has been showing so much gas that the crew has been obliged to use considerable quantities of colox to keep it under control. This well is located farther out on the structure than two other wells drilled up to the present and the result



will be watched with interest. In the Brea Olinda field Shell Oil Co. completed No. 4-1 Columbia pumping 35 bbls. of 34.1-gravity oil daily from 4,935 feet but output was still cutting in excess of pipe line requirements at last report. In the Torrance field Four Way Oil Co. has completed No. 1 fee pumping 21 bbls. of 19.9-gravity oil daily from 4,752 feet.

Rocky Mountain Areas

(Continued from Page 88)

Consolidated Gas Co. No. 2 Lutz, C SE NE sec. 33-33n-2w. Drlg. 500 ft.
G. & A. Oil Co. No. 10 Goeddertz, NE SW SW sec. 23-35n-3w. Drlg. 930 ft.
A. H. Blaze No. 6 Burwash, SW NW SW sec. 15-34n-1w. Drlg. 650 ft.
A. E. Crumley & Sons No. 10 Fryberger, SW NE SE sec. 24-35n-3w. Drlg. 1,250 ft.
Pfabe & Engleking No. 1 Innerberg, NW SE SE sec. 26-35n-4w. Drlg. 1,510 ft.
M. W. Cassidy No. 1 Mary, CEL NE NW sec. 5-34n-3w. Drlg. 1,470 ft.
Welch Bros. No. 1 Ward, C SE NE sec. 29-35n-3w. T.D. 1,665 ft.; rng. 7-in.
C. T. Olen No. 7 Engemoen, C NW NW sec. 14-35n-2w. T.D. 1,607 ft.; contact 1,591 ft.; stdg.
C. L. Tomlinson No. 1 Davidson, NW NE SE sec. 28-35n-3w. S.D. 1,500 ft.
E. O. Reickhoff No. 3 Baum, SW SW SE sec. 3-35n-3w. S.D. 110 ft.
California Co. No. 7 Neumann, NW NW NE sec. 23-35n-2w. R.U.
California Co. No. 6 Neumann, NE NW NE sec. 23-35n-2e. T.D. 1,472 ft.; cmtd. 1,472 ft.; 600 ft. oil; prep. to test.
McCurdy No. 1 Hollowell, C SE SW sec. 1-35n-3w. T.D. 1,200 ft.; bailing to test.
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w. Drlg. below 2,010 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier mach. to resume.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37-3w. Drlg. 2,100 ft.
Coolidge & Coolidge (formerly Hardrock Oil Co.) No. 1 Keilbaugh, C NW SE sec. 13-37n-1w. S.D. 425 ft.

Yellowstone County

Riverto Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. S.D. 1,041 ft. for supplies; (formerly Western Dakota Oil Co.).
Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. Drlg. 2,670 ft.; S.O. in Lakota core; no results in tester.
Laurel Oil Co. No. 1, C NW SW sec. 7-2s-24e. R.U.

UTAH

Carbon County

Kelly Young No. 1, NE NE SE sec. 30-14s-10e. T.D. 1,080 ft.; S.G. through H.F.W.; U.R. 6⅝-in. for S.O.

Daggett County

Mountain Fuel Supply Co. No. 1 Smith, C SW NE sec. 30-3n-24e. Drlg. 1,893 ft.

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.
Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 2,334 ft.
Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. Drlg. 300 ft.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. Drlg. 3,000 ft.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. S.D. indef. at 2,531 ft.

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. T.D. 110 ft.; R.U.R.; 132-ft. steel drk. up to replace wooden drk. blown down.

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. Drlg. L. and shells 2,200 ft.; probably base of Lakota; good S.G. at 2,050 ft. and 2,100 ft.

Jefferson County

L. R. Page et al No. 1 Bonham, C SE SE sec. 1-1n-1e. Drlg. 1,045 ft. in hd. gr. L.

Richardson County

Arab Pet. Co. No. 1, SE SE sec. 9-1n-14e. Drlg. 1,700 ft.

Drilling Restrictions Upheld

The Oklahoma state supreme court has handed down two important decisions: It upheld restrictions against oil drilling in Lincoln terrace, Oklahoma City residential district, and it ruled that taxpayers are not required to open their books for promiscuous inspection by tax ferrets.

The court upheld plat restrictions against oil drilling in Lincoln terrace by a 7-to-1 decision, sustaining injunctions granted three property owners by District Judge Ben Arnold.

The injunctions virtually created a legal island out of the 23-block area which was set aside for residential purposes several years before oil was discovered at Oklahoma City.

Justice Thurman Hurst's opinion said "A valid restriction that all lots in this plat are restricted to residences only prevents the use of such property for the drilling of oil and gas wells."

If you could reach down the hole 5,000 or 10,000 feet and feel how smoothly the drilling string was rotating — and how evenly round and out to gauge the hole was reamed after a SIEVERS REAMER had sliced its way downward, — we would have another customer from then on. The next best thing is to run one and judge from what the drillers say while making hole and after they have set casing without finding any tight spots. They are Safe, and Cost Less Per Foot. SIEVERS REAMERS. Security Engineering Co., 108 West Whittier Blvd., Whittier, California, or call Wilson Supply Co., Houston.

PERSONAL

WILLIAM M. KECK, Houston, Tex., president of the Superior Oil Company, and his bride, the former Mrs. Helen Troy of Pasadena, Calif., left Reno, Nev., last Friday on a honeymoon tour following a surprise wedding in St. Thomas Aquinas Cathedral in Reno, Nev., Thursday. Mrs. Keck's first husband, John James Troy, financier, died in 1927. Mr. Keck's first wife was killed a year ago in an automobile accident. Mr. and Mrs. Keck plan a round-the-world trip.

GILLERMO DE LA GARZA was a visitor in the Mid-Continent area during the past two weeks. Senor de la Garza is assistant general manager in charge of production and field operations of Cia Petromex, the government-owned oil organization of Mexico. A native of Mexico, he spent eight years of his collegiate life in Los Angeles, and speaks fluent English.

J. D. COLLETT, president of the General Mid-Continent Oil and Gas Association, has announced that the annual meeting of the general board of directors of the association will be held in Tulsa on Tuesday, December 14. Complete plans for the meeting have not yet been arranged.

A. D. KING, Shreveport, La., oil man, has returned from Port Isabel, Tex., where he, MRS. KING and their daughter and son-in-law fished in the Gulf of Mexico. Mr. and Mrs. King and their son-in-law and daughter, MR. and MRS. T. J. MATTHEWS, of Overton, Tex., on their first day out caught 96 king mackerel, five Spanish mackerel and two dolphins. They plan to mount the latter. The catch was made 6 or 7 miles from shore. The party caught 45 fish the second day, weighing 200 pounds.

T. J. DONOGHUE, Houston, Tex., vice president of the Texas Co., and MRS. DONOGHUE have returned from a vacation trip in the East.

IVAN L. WILLIS, formerly personnel director for the Carter Oil Company in Tulsa, has been transferred to the New York office of the Standard Oil Company of New Jersey, as assistant manager of industrial relations. He reeently completed nine months of special duty in 11 European countries, where he did personnel organization work. A. H. MITCHELL has been in charge of personnel work for the Carter during Mr. Willis' absence.

W. K. WHITEFORD, vice president and director of the British American Oil Producing Company, Tulsa, who flew to California September 8, returned last week by plane, bringing his two sons, BILLY and PETER. The boys had been in California since last winter with their grandmother, MRS. GRACE K. WHITEFORD, who later in the fall will go to the East Coast by boat and will visit the Whitefords in Tulsa on her way overland back to her home in California.

E. L. BOLYARD has been stationed in Shreveport, La., as geologist by the Barnsdall Oil Company.

JAMES E. FLANAGAN, Tulsa oil producer, is on a combined business and pleasure trip to eastern cities.

L. S. PANYITY, Bradford, Pa., geologist, is on a professional trip to western Kansas oil fields, where he will remain two weeks.

S. P. FARISH, president of the Navarro Oil Company, Houston, Tex., has returned from an extended vacation trip in the East. He was accompanied by MRS. FARISH.

JOHN E. MABEE, president of the Mabee Consolidated Oil Corporation, Tulsa, has returned from the Canadian Rockies, where he spent a month's vacation.

RAYMOND VAN EATON, of the Mills Bennett Production Company, Corpus Christi, Tex., has been taken home from a hospital to complete convalescence from a recent operation.

H. GARDNER CLAPP has accepted an assignment of foreign duty in Afghanistan and Iran from the Inland Exploration Company and the Amiranian Oil Company. He sailed from New York and will be abroad two years.

J. FILHOL, head of the information service department of the French government petroleum department (O.N.C.L.), and PROF. H. WEISS, director of the Strasbourg Ecole Nationale Superieure du Petrole, have been named chevaliers of the Legion d'Honneur. Mr. Filhol was the hard-working secretary of the recent World Petroleum Congress in Paris.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Albert M. Coyle, chief engineer, brother of George Coyle, general superintendent of the Prairie Oil & Gas Company, was killed when an explosion wrecked company pipe line buildings in the Cleveland, Okla., field.

California and Mexican oil companies are anxiously awaiting the opening of the Panama Canal. They expect to profit largely by the extension of their markets which it will make possible.

When offered a one-sixth royalty for an oil lease in Illinois, William Barnes, Wabash County farmer, demanded a seventh, and the prospective purchaser offered to go even farther and give an eighth. So the deal was made.

20 YEARS AGO

Joseph F. Guffey, president of the Natural Gas Association of America resigns to become associated with Bernard Baruch in the purchasing of oil for the raw material section of the War Industries Board.

Because of the World War material for oil operations is hard to get and when available cost as much as 100 per cent more than in 1915.

N. C. Essary, Oklahoma oil man, descends into an 18-inch drill hole eight times, once reaching a depth of 510 feet. It was a fishing job. Mr. Essary weighs 185 pounds.

10 YEARS AGO

Charles G. Black, new president of the Standard Oil Company of New Jersey, a Delaware corporation, began work with the Standard at the age of 14 years. His first job was cutting and bending wire to make handles for oil cans. This was in 1882.

W. S. Farish, president of the Humble Oil & Refining Company, estimates that the Yates pool in Pecos County, Texas, will produce 255,000,000 bbls. Only five fields in the United States have produced that much oil, these being Midway-Sunset, Coalinga, Cushing, Kern River and Bradford.

THOMAS P. THOMPSON, oil producer of Bradford, Pa., and MRS. THOMPSON are visiting in Atlantic City, N. J.

W. S. MORRIS, director of the East Texas Engineering Association, Kilgore, Tex., is spending his vacation at his former home in North Carolina.

W. F. BOWMAN, chief geologist for the Tide Water Associated Oil Company, Houston, Tex., has resigned to enter private practice as consulting geologist.

M. C. DILLINGHAM has been transferred from the Pampa, Tex., office of the Texas Railroad Commission to Corpus Christi. He is in the engineering department.

I. W. MURFIN, independent oil operator, has returned to his home in Wichita, Kans., after a long vacation trip in Minnesota, on the Great Lakes and in Canada. He was accompanied by his family.

R. S. CURL, of the Associated division, Tide Water Associated Oil Company, has been appointed superintendent of the Los Angeles Basin division in charge of all development and production activities.

A. V. BOURQUE, secretary of the Western Petroleum Refiners Association, should now be addressed as "Chief," for he has been made a member of the Black Feet tribe of Montana and given the name "Boy Chief."

C. H. LIEB, president of the Carter Oil Company, Tulsa, with MRS. LIEB, and their two sons, FRED and JACK, have returned home from Santa Fe, N. Mex. Mrs. Lieb and the two children spent the summer there and Mr. Lieb joined them for his vacation.

PARAGRAPHS

JUDGE J. R. DOUGHERTY, of Beeville, and M. F. HURLBUT, of Corpus Christi, have organized the La Sal Vieja Oil Corporation and are beginning wildcat operations in Willacy County, South Texas. Both men are officers of the Flour Bluff Oil Corporation, which drilled the discovery well in the Flour Bluff field of Nueces County.

CAPTAIN J. A. BOVILL, master of the English tanker British Corporal, was in Houston, Tex., last week lifting a cargo of gas oil from the Baytown refinery of the Humble Oil & Refining Company. Captain Bovill related the experiences of the British Corporal when she was attacked by three unidentified planes off the coast of Algiers in August. After attempting to bomb the tanker, the three planes strafed the vessel with machine-gun fire when the crew made preparations to abandon ship. No personal injuries were suffered by the crew, but the wireless apparatus was rendered useless by concussion of bombs which fell 30 feet from the boat. The wireless operators' cabin was pierced by shrapnel, inflicting additional damage. The tanker cleared Houston for a port in France.

MAJOR JOHN BRYCE SHAW, of the Ohio Oil Company, Wichita, Kans., accompanied by MRS. SHAW, left for New York last week to attend the national convention of the American Legion. Before returning home they will visit Major Shaw's parents in Pittsburgh, Pa. He served in the One Hundred Tenth machine gun battalion and the Sixth Infantry in the World War.

L. H. KENDALL has been named chief engineer of the Houston, Tex., refinery of the Shell Petroleum Corporation. Formerly filling that position in the Shell's Norco, La., plant, Mr. Kendall was transferred to Houston this year to superintend the recent construction work at the refinery. He returned to Norco following completion of the refinery expansion program and after two months is back in Houston. The appointment was made effective September 20.

BUELL F. JONES, general attorney for the Standard Oil Company of Indiana, made the Hole-in-One Club September 14, playing in the Stanolind Golfing Association tournament at Olympia Fields. The shot was made on hole No. 14, 135 yards, of course No. 1 and was witnessed by accompanying golfers and the foursome ahead.

FRANK PHILLIPS, president of the Phillips Petroleum Company, will be host next Sunday afternoon to the Mid-Continent and Tri-State sections of the American Institute of Mining and Metallurgical Engineers, together with guests of members, at a joint picnic meeting at Woolaroc lodge, near Bartlesville, Okla. This will be the first fall meeting of the sections and primarily the program will be one of social entertainment, recreation, and a barbecue luncheon. Two short discussions of an economic nature will be presented.

O. E. MANION, chief geologist for the Superior Oil Company, Houston, Tex., left last week for a two-week vacation trip.

CHARLES G. LASKEY, geologist for T. L. James & Company of Ruston, La., has been appointed to the state mineral board by GOVERNOR LECHE.

DAVID BRUTON, independent operator of Houston, Tex., has returned from a three-month vacation trip through England, France and Switzerland. He was accompanied by MRS. BRUTON.

JAMES G. SHIDLER and MISS JULIA YORK were married recently in Whittier, Calif. The bride is a daughter of VICTOR H. YORK, president of the York Oil Company, Santa Fe Springs, Calif.

R. W. HOFFMAN, of the Union Oil Company, has been appointed assistant manager in charge of service and sales in the southern region, and H. E. GOLDING has been appointed assistant regional manager in charge of operations in the same area.

FOSTER DEE SNELL, president of Foster D. Snell, Inc., Brooklyn, N. Y., was elected a vice president of the Society of Chemical Industry at the annual general meeting held in Harrogate, England. This is the first time since 1928 that an American has been elected an officer of the society.

JOHN D. GLASS, chief investigator for the Federal Tender Board in East Texas, resigned last week to begin the practice of law in Tyler, Tex. Mr. Glass, a former agent in the federal bureau of identification, had been in charge of enforcement of the federal hot oil act in the East Texas field.

Around the Wells at 14

J. M. Bower had accumulated some 23 years of oil experience before he joined the Pure Oil Company, for which he is assistant division superintendent in Oklahoma and Kansas.

J. M. BOWER

Born in Risingsun, Ohio, he began working around the oil wells in that district at 14. After graduating from high school he worked as a roustabout and pumper. In 1909 Mr. Bower entered the employ of the Indian Refining Company. He remained in its service 14 years, at the end of which he had become district superintendent at Petersburg, Ind. Then he joined the Humphreys Oil Company and brought in the first deep producing well in the Corsicana field.

The Pure Oil Company acquired the Humphreys properties in March, 1924, and in November of that year Mr. Bower was made superintendent of the district embracing the Mexia, Wortham and Currie fields in Texas. In 1929 he was transferred to Tulsa as assistant division superintendent. Two years later, when the depression was near its low, that post was discontinued and for several years Mr. Bower served as district superintendent in different areas. In November, 1935, he was moved back to Tulsa, where he assumed the responsibilities of his present position. Mr. Bower married Miss Ola Fox, and they have three daughters and two sons. He is a baseball, football and boxing fan, and he goes hunting when he gets a chance.

EMBY KAYE, vice president of the Skelly Oil Company, is in Washington, D. C., as part of a business trip in the East.

DICK SCHWAB, independent producer of Houston, Tex., has returned from an extended vacation trip in California.

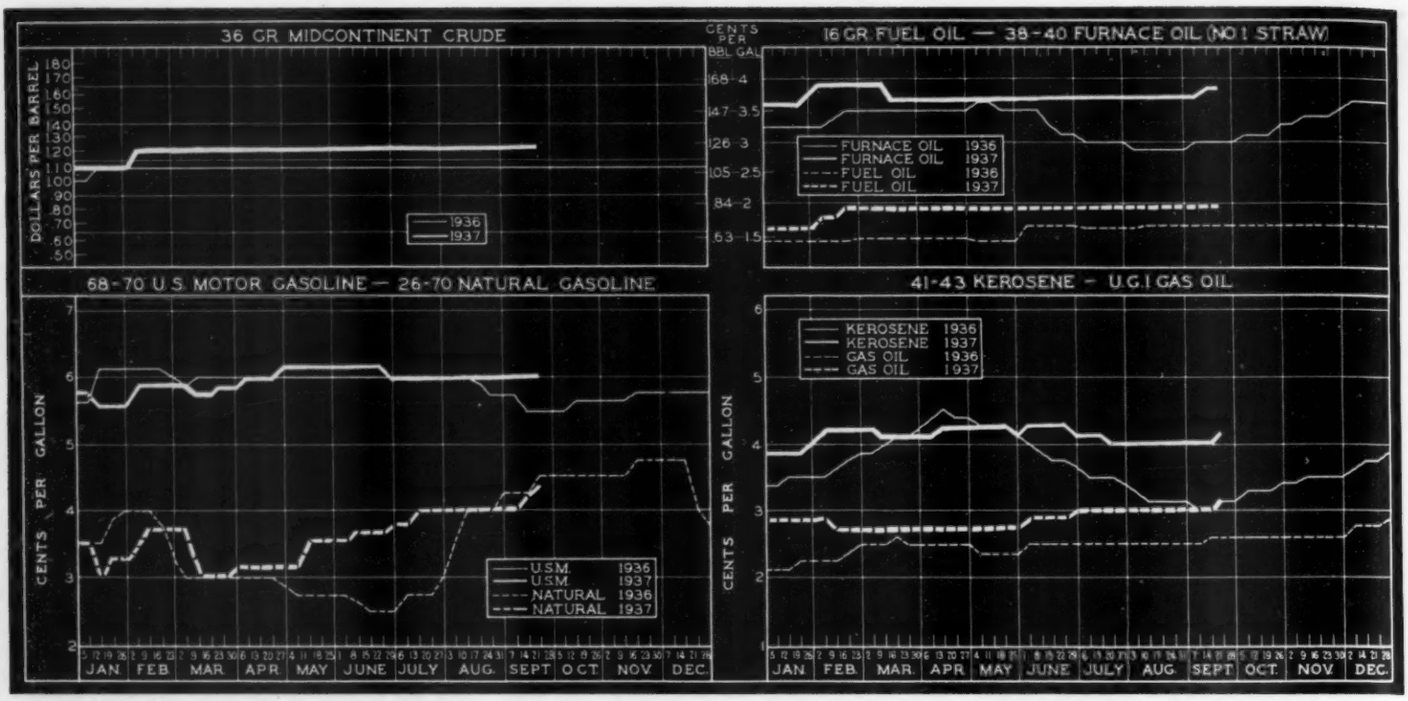
EDWIN O. BARTLETT, retired oil executive of Tulsa, and MRS. BARTLETT are on an eastern trip which will take in Pittsburgh and Bradford, Pa., and Cuba, N. Y.

CRAIG F. CULLINAN, chairman of the board of the American Republic Corporation, Houston, Tex., was elected chairman of the advisory committee of the Intercoastal Canal Association.

JOHN DAY, assistant secretary of the Western Petroleum Refiners Association, with offices in Tulsa, spent Monday of this week in New York and flew to Wichita, Kans., to attend the association's technical meeting there.

WILLIAM L. GOMORY, chemical engineer and petroleum technologist, has transferred his headquarters from Paris, France, to New York. He will continue to serve as technical and patent adviser for a group of companies which he has represented for the past 12 years.

TOM BELL, Southern California operator, aroused the envy of California friends by letters from South Africa describing big game experiences. Cessation of his messages caused concern. J. R. PEMBERTON, California oil umpire, has received a letter explaining the interruption. Tom was bitten and clawed by a leopard and had to go to a hospital. He expects to be out in a few weeks.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Naturals and Fuel Oils Provide Only Sign of Life in Quiet Group 3 Area

By D. H. STORMONT

All divisions of the Group 3 tankcar market were holding up well this week, natural gasoline and the burning oils supplying the life in an otherwise fairly quiet market. Gasoline, which has been somewhat unsettled and lifeless for the past few weeks, showed little tendency to move either up or down. The whole range of burning oils was firm, and naturals in a slightly better position.

Natural Gasoline Higher

Natural gasoline moved to a new year's high the past week, the 26-70 grade advancing to 4¼ cents in Oklahoma and 4⅜ cents in North Texas. The strength of the present market was attributed to vigorous and steady demand and the one-eighth cent increase in quotations due mainly to bids made by refiners to obtain ready material. Demand for the 18- and 22-pound material was somewhat off as orders for the higher vapor pressure grades piled in. Gulf Coast refiners supplying gasoline to export and coastwise buyers continued active buying while domestic refiners bought in substantial volume for blending their fall motor fuels. Most contract buyers were taking all material they could get under their contracts and spot buyers were increasing their purchases.

Although at present trailing last year's prices by one-eighth cent, the natural gasoline market this year has been one of the most successful and stabilized for many years. Prices to date have varied only 1⅜ cents during the year, and the low for the summer was only three-fourths cent below the price received last February. Although stocks of natural gasoline are substantially larger than those at this time a year ago, field stocks are in good shape and manufacturers generally are looking forward to a fairly profitable year. For, as was pointed out by one manufacturer, it is much better business to obtain a reasonably profitable price over a period of several months than to push the price out of line with refined gasoline when a tight market condition makes such procedure possible.

The tankcar gasoline market continued to feel the influence of high daily crude runs and large inventories, especially so as each week sees the season of slackened demand just that much nearer. Although quiet, it was reported that there was no price shading in the higher-octane gasolines. Some very low-octane gasoline was reported to be piling up in North Louisiana and East Texas. This class of material is finding increased difficulty in being marketed as a motor fuel as the percentage of high-compression cars increases, especially material that has too high a vapor pressure to permit the addition of natural gasoline and too low an octane rating to be profitably leaded up to regular grade requirements.

There has been a substantial export of aviation gasoline in recent weeks, and so long as war clouds darken the skies this is to be expected. One large shipment to Japan was completed last week, the shipment involving several million gallons. These movements gave additional strength to an already firm seaboard aviation and gas oil market and resulted in the Japanese government making inquiries at the Gulf Coast, although no sales were made, it was reported.

Heating Oils Strengthening

Interest in the light grades of heating oils continued to mount as their season of importance nears, the result being that the various grades were closely held. Some refiners were holding their material in anticipation of higher prices, while others needed their present stocks and plant output to meet contracts. One refinery sales manager stated that where ordinarily his stocks of material were sufficient to meet fall contract deliveries, he was now shopping for material.

Gas-oil and heavy fuels were in good position, although the latter was reported to be piling up in some points. Wax continued to experience a good movement as it moves into it big demand season.

Refined Oil Market Barometer

Tankcar gasoline market quiet in Central West as high crude runs hold inventories at high levels. Tankcar and retail markets improved on Atlantic Coast, while on the Pacific Coast foreign buying and warm weather stimulate gasoline movement. Light fuel oils tending to increased firmness as cooler weather approaches. Natural gasolines again advanced as heavy buying continues.

MID-CONTINENT. Gasoline quiet. Naturals higher. Burning oils firmer.

EAST COAST. Tankcar gasoline stronger. Fuel oil steady. Lubricants soft.

GULF COAST. Gasoline firm. Kerosene stronger. Burning oils tight.

CALIFORNIA. Gasoline strong. Diesel oils and fuel oils firm.

PENNSYLVANIA. Gasoline steady. Kerosene higher. Bright stocks weak.

CHICAGO. Tankcar gasoline steady. Furnace oils stronger. Fuel oil firm.

Motor Fuel Firm on Atlantic Seaboard With Demand Above Expectation

By H. STANLEY NORMAN

NEW YORK, Sept. 20. — The gasoline market along the Atlantic Seaboard has continued firm during the past week. The trade reports an appreciably smaller falling off in demand this month than had been expected, despite the fact that weather conditions have been far from perfect. Although September usually is a good month in the gasoline trade, this year it is said to be above expectations, probably due to the fact that general business is unusually active in this section.

The satisfactory state of the markets was reflected in the widespread optimism voiced by delegates to the seven-state conference on automotive taxation held here this week under the auspices of the New York Petroleum Industries Committee of the American Petroleum Institute. This conference was attended by petroleum refiners, distributors and service station operators from New York, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut. It was brought out that not only has the trade enjoyed a generally higher level of prices this year, but local price wars have been less frequent and of a less serious nature than in any recent years. There was a tendency among motorists, it was said, to purchase more of the premium grades, attaching less importance to cost.

In pointing out that New York motorists alone will pay $20,000,000 more in gasoline taxes this year than last, R. L. Graham, secretary to the committee, stated that more than half of the motorists of the state earn less than $30 per week. He said further: "Most of these motorists have never owned a new car. They ride an average of 40 eight-hour days a year, much of that time being spent going to and from work. The typical New York motorist must work one or two weeks to pay the taxes on his annual motor travel. He owns a car four or five years old, whose value is less than $200. The special automotive taxes that he pays to the state and federal governments are equivalent to 25 to 50 per cent of the value of his car."

Bulk gasoline has held firm during the week. Some shading has been reported but it has been of minor importance. A shipment in barges destined for central New York was reported to have been closed at 7.15 cents per gallon but this could not be confirmed. In the retail section some price-cutting is still current in the metropolitan area, but some stations have raised their special prices from as low as 7 gallons for 90 cents, to 6 gallons for $1.11.

New York Public Service Commission has approved new freight rates applying to petroleum products, involving both advances and reductions of minor importance. The changes apply mainly to intermediate points along the New York Central, Erie and Boston and Albany railroads.

There have been no changes in the fuel oil market during the week. Prices are steady with an improved demand for kerosene and furnace oils. One cargo of furnace oil is reported to have been purchased on the Gulf for North Atlantic delivery, but the price paid could not be learned. Nothing in the furnace oil situation indicates any material shading of prices this fall. In fact everything points to a firm market throughout the winter. Even should the demand fall below expectations, which appears unlikely, supplies are not any too ample, while new sources of supply are not apparent.

Eastern refiners have drawn rather heavily on Southwest Texas crude as a source of furnace oil manufacture, but new discoveries in that area have, for the most part, provided a ligth oil, instead of heavy crude. No material increase in imports of crude oil or fuel oil can be expected while the present import tax is in effect. Meanwhile the large increase in production of light oils in this country has provided eastern refiners with little hope of boosting their furnace oil stocks to any extent, except at the cost of unduly increasing their gasoline inventories, which they are reluctant to do.

The bunker fuel oil market has not revealed any new development worthy of special mention. The bulk of the current movement is against contracts at the posted price of $1.35 per barrel, lighterage extra.

Lubricating oil prices turned soft during the past week. This is mostly in line with seasonal slackening in the trade and with the recent softness in the Pennsylvania crude oil market. Cylinder oils have borne the brunt of the recession with neutral oils holding fairly steady.

In the export department, 600 Warren E cylinder oil is now quoted at 22½ to 24½ cents per gallon f.a.s. in barrels. Other revised prices include 600 S.R. unfiltered oil at 20½, 630 S.R. at 23½, 600 flash S.R. at 24 and 630 flash S.R. at 28½. These prices represent average declines ranging from 2 to 3½ cents per gallon compared with peak summer quotations. Neutrals, although below the prices of a month ago, include 200-3 color at 31 cents and 150-3 color at 27.

The Gulf export market for gasoline continues steady to strong. New business has been rather limited. European buyers are showing an inclination to hold off, in view of some reported softness in the Group 3 refinery market. On the other hand a scarcity of blending material is noted and sellers are not disposed to take the possibility of a recession too seriously.

Foreign purchasers are watching the Rumanian market for export gasoline, which has shown some weakness recently. So far offerings of such gasoline at reduced prices have been small and the concessions given have been not more than one-eighth of a cent per gallon below the normal quotation.

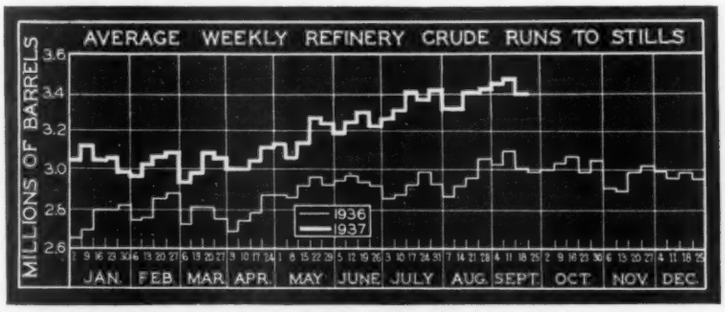
On the other hand the Rumanian export market for fuel oil has been exceptionally strong, with prices ranging about one-half cent per gallon above those prevailing during the summer.

A. P. I. Weekly Refinery Statistics

Week Ending September 18, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	558,000	18,747,000	15,236,000
Appalachian	88.4	112,000	2,679,000	921,000
Indiana, Illinois, Kentucky	92.4	433,000	10,265,000	7,233,000
Oklahoma, Kansas, Missouri	84.7	325,000	6,141,000	3,698,000
Inland Texas	56.6	142,000	1,693,000	1,827,000
Texas Gulf	95.5	707,000	7,822,000	10,443,000
Louisiana Gulf	96.6	158,000	1,986,000	3,042,000
North Louisiana and Arkansas	63.7	47,000	433,000	388,000
Rocky Mountains	69.7	53,000	1,284,000	765,000
California	90.9	567,000	11,437,000	69,305,000
Total reported	88.9	3,102,000	62,487,000	112,858,000
Estimated unreported	.....	298,000	3,570,000	3,320,000
Estimated total*	.....	3,400,000	66,057,000	116,178,000
Estimated total previous week*	.....	3,455,000	66,456,000	114,666,000
September 19, 1936*	.....	3,010,000	57,286,000	113,118,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending September 11, 1937	311,780,000 bbls.
Week ending September 4, 1937	310,417,000 bbls.
Week ending September 12, 1936	297,962,000 bbls.

Tax Evasion

ATLANTIC CITY, N. J. — Creation of interstate boards for dissemination of information between state collectors of gasoline taxes was proposed at the annual governors' conference by Governor Leslie A. Miller of Wyoming.

"Differing laws and tax rates in gasoline," he said, "have caused us much evasion and lost revenue. There should be a central agency to exchange information between tax officials."

One way to prevent bootlegging of a gasoline, he said, is to designate regular ports of entry at which all gasoline trucks must enter a state. But even that system is ineffective if bordering states do not cooperate, he said.

Ben C. Belt, chief geologist of the Gulf Oil Corp., Houston, Tex., has returned with Mrs. Belt from a trip to Connecticut.

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of September 21, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank-wag.
Chicago, Ill.	15.5	13.5	4.0	10.1
Decatur	15.5	14.0	4.0	10.1
Joliet	15.5	14.0	4.0	10.1
Peoria	15.5	14.0	4.0	10.1
Quincy	15.3	13.8	4.0	9.9
Davenport, Ia.	15.5	14.0	4.0	‡13.1
Des Moines	15.3	13.8	4.0	‡12.9
Mason City	15.7	14.2	4.0	‡13.3
Sioux City	15.5	14.0	4.0	‡13.1
Duluth, Minn.	17.3	15.8	5.0	10.9
Mankato	16.9	15.4	5.0	10.5
Twin Cities	16.9	15.4	5.0	10.5
Lacrosse, Wis.	16.9	15.4	5.0	10.5
Green Bay	17.2	15.7	5.0	10.8
Milwaukee	16.8	15.3	5.0	10.4
Detroit, Mich.	15.4	13.9	4.0	9.8
Grand Rapids	16.5	15.0	4.0	10.9
Saginaw	16.3	14.8	4.0	8.5
Evansville, Ind.	17.0	15.5	5.0	†10.6
Indianapolis	17.2	15.7	5.0	†10.8
South Bend	17.4	15.9	5.0	†9.6
Fargo, N. Dak.	16.9	15.4	4.0	11.5
Minot	18.1	16.6	4.0	12.7
Huron, S. Dak.	17.3	15.8	5.0	10.9
Kans. City, Mo.*	14.9	13.4	4.0	8.0
St. Louis*	15.2	13.7	4.0	9.8
St. Joseph*	14.9	12.4	4.0	8.5
Wichita, Kans.	14.4	12.9	4.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N. J.	13.5	12.0	4.0	9.0
Newark	13.5	12.0	4.0	9.0
Annapolis, Md.	15.6	14.1	5.0	9.5
Baltimore	15.0	13.5	5.0	9.0
Cumberland	17.4	14.9	5.0	10.0
Wash'g'n, D. C.*	12.5	11.0	3.0	9.5
Danville, Va.	18.2	15.7	6.0	12.9
Norfolk	17.0	14.5	6.0	11.5
Petersburg	17.3	14.8	6.0	11.7
Richmond	17.3	14.8	6.0	11.7
Roanoke	18.5	16.0	6.0	12.9
Charles'n, W. V.	17.8	15.3	6.0	12.6
Parkersburg	17.1	14.6	6.0	11.2
Wheeling	17.0	15.5	6.0	12.2
Charlotte, N. C.	19.4	16.9	7.0	12.6
Hickory	19.9	17.4	7.0	13.0
Mt. Airy	19.7	17.2	7.0	12.8
Raleigh	19.0	16.5	7.0	12.1
Salisbury	19.5	17.0	7.0	12.7
Charleston, S. C.	18.0	15.5	7.0	11.1
Columbia	19.0	16.5	7.0	12.1
Spartanburg	19.7	17.2	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington and Baltimore where station prices of 16.0 and 18.5 cents, respectively, are in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5-cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Net dlr.	Inc. tax	tank-wag.
Atlanta, Ga.	22.0	19.0	7.0*	†12.0
Augusta	21.0	18.0	7.0	*14.0
Macon	21.5	18.5	7.0	*14.5
Savannah	19.0	16.0	7.0	*12.0
Birm'ham, Ala.	22.0	19.0	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	22.0	19.0	9.0	14.5
Jackson, Miss.	21.0	18.0	7.0	*13.0
Vicksburg	20.5	17.5	7.0	*13.0
Jacksonville, Fla.	20.5	17.5	8.0	†10.0
Miami	20.5	17.5	8.0	†12.0
Pensacola	22.0	19.0	9.0	12.0
Tampa	20.0	17.0	8.0	10.5
Lexington, Ky.	20.0	17.0	6.0	11.0
Covington	19.5	16.5	6.0	11.0
Louisville	20.0	17.0	6.0	10.5
Paducah	20.0	17.0	6.0	10.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Denver, Colo.	17.5	5.0	11.5
Grand Junction	20.0	5.0	15.0
Pueblo	16.0	5.0	10.5
Casper, Wyo.	18.0	5.0	11.5
Cheyenne	18.0	5.0	13.0
Butte, Mont.	19.5	6.0	15.5
Billings	21.0	6.0	15.5
Helena	21.5	6.0	15.5
Great Falls	21.5	6.0	15.5
Salt Lake, Utah	19.5	5.0	16.0
Twin Falls, Ida.	21.5	6.0	18.0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag. con'r.	Di-vided dlr.	Inc. tax	tank-wag.
Ohio points	17.0	16.0	5.0	*13.5

*Includes state tax of 1 cent.

Discounts to commercial consumers, contract: Effective Aug. 12, 1937, for Ohio state-wide, 20,000 gallons or over per month, 1 cent per gallon off commercial consumer tank-wagon price. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price. Price to undivided dealers is same as to commercial consumers.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dir.	Inc. tax	tank-wag
Omaha	17.9	16.4	6.0	10.4
McCook	18.0	14.0	6.0	10.0
Norfolk	18.3	16.8	6.0	10.8
North Platte	18.7	17.2	6.0	11.2
Scotts Bluff	19.4	15.9	6.0	11.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	9.0
Fresno, Calif.	18.5	19.5	4.0	12.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	21.0	5.0	13.0
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	15.0	13.5	5.0	9.0
*Met. N. Y.:				
Manh't'n, Br'nx	15.0	13.5	5.0	9.0
Staten Island	15.0	13.5	5.0	9.0
Q'ns & Brklyn	15.0	13.5	5.0	9.0
Buffalo	15.8	14.04	5.0	8.5
Rochester	15.5	14.17	5.0	8.5
Syracuse	15.5	14.12	5.0	9.5
Boston, Mass.	12.5	13.5	4.0	8.5
Portland, Me.	15.8	13.5	5.0	8.75
Manch'ter, N. H.	16.3	14.0	5.0	9.5
Burlington, Vt.	15.9	13.9	5.0	9.5

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank wag.
Muskogee, Ok.	15.0	5.0	7.0
Oklahoma City	14.0	5.0	8.0
Tulsa	14.0	5.0	7.0
Ft. Smith, Ark.	15.5	5.0	10.0
Little Rock	18.0	7.5	9.5
Texarkana	15.5	5.0	8.5

Texas

	Gasoline			Kero
	Tank wag.	Serv. sta.	Inc. tax	tank wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	18.5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank wag.
N. Orleans, La.	20.5	18.0*	10.0	†13.0
Baton Rouge	18.5	16.0	8.0	12.0
Alexandria	19.0	16.5	8.0	12.0
Lafayette	19.5	17.0	8.0	13.0
Lake Charles	19.5	17.0	8.0	12.5
Shreveport	18.0	15.5	8.0	9.5
Knoxville, Tenn.	21.5	19.0	8.0	14.0
Memphis	19.5	17.0	8.0	12.0
Chattanooga	21.0	18.5	8.0	13.5
Nashville	20.5	18.0	8.0	11.0
Bristol	20.25	19.0	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 24 and 22 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1 cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank wag.
Philadelphia, Pa.	14.5	13.0	5.0	10.0
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	15.0	13.5	5.0	11.0
Erie	14.5	13.0	5.0	11.0
Scranton	15.0	13.5	5.0	11.0
Altoona	15.5	13.5	5.0	11.0
Dover, Del.	14.5	....	5.0	11.0
Wilmington	14.5	....	5.0	11.0
Springf'd, Mass.	14.3	....	4.0	9.0
Worcester	14.8	....	4.0	9.0
Hartford, Conn.	14.6	....	4.0	9.0
New Haven	14.0	....	4.0	9.0
Providence, R. I.	14.0	....	4.0	8.5

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N.S.	24.0	8.0	18.5
St. John, N.B.	24.0	8.0	18.5
Montreal, Que.	21.0	6.0	17.5
Toronto, Ont.	22.0	6.0	17.0
Hamilton, Ont.	22.0	6.0	17.0
Winnipeg, Man.	28.2	7.0	20.7
Brandon, Man.	29.8	7.0	22.3
Regina, Sask.	29.5	7.0	22.0
Saskatoon, Sask.	32.3	7.0	24.8
Edmonton, Alta.	29.5	7.0	24.2
Calgary, Alta.	27.0	7.0	21.5
Vancouver, B.C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. of Kentucky September 2 advanced tank-wagon kerosene .5 cent in Miami; September 9 advanced tank-wagon and dealer gasoline 2 cents in Mobile.

Standard Oil Co. of Nebraska September 5 reduced dealer gasoline 3.1 cents in McCook.

Socony Vacuum Oil Co., Inc., September 2 advanced tankcar consumer gasoline .25 cent and split dealer tank-wagon .2 cent in Rochester.

Missouri Tax Protest

Voters of Missouri will have an opportunity at the next general election, in November, 1938, to reject the 1-cent gasoline tax increase passed by the legislature last spring. This became certain with the filing of 163,000 signatures in favor of a referendum petition, more than double the 65,000 signatures needed, and they were obtained in less than 30 days.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of September 21, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
60-62 400 grades:		
62 oct. and below (3d gr.)		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
64-66 375	.05	.05¼
68-70 360	.05⅛	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
60-62 400		.05
64-66 375	.05	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below		.05½
63-66 octane	.05¾	.06
67-69 octane	.06⅛	.06⅜
70-72 octane (regular)		.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below		.05½
63-66 octane		.06
67-69 octane	.06⅛	.06⅜
70-72 octane (regular)		.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05⅛
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.05	.05⅛
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)	.06	.06⅛
64-66 375	.05	.05⅛
68-70 360	.05¼	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.06	.06⅛
60-64.9 octane	.07⅜	.07⅝
65-70 octane	.07½	.07¾
64-66 375	.06⅛	.06¼
68-70 350	.06¼	.06⅜

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.07¼
Baltimore		.07¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07½	.07¾
Philadelphia	.07½	.07¾
Boston		.07¾
Baltimore	.07½	.07¾
Charleston, S. C.		.07¾
U. S. Motor, 65 and above:		
*New York (Bayonne)	.08	.08½
Philadelphia	.07¾	.08¼
Boston	.08	.08½
Baltimore		.08
Charleston, S. C.		.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:	
Below 60 octane	.06⅛
60-64.9	.06¼
65 octane and higher	.06½

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05¾	.06
52-54 450 (blending)	.05¾	.06
54-56 450 (blending)	.05⅞	.06⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.04⅝
Grade 18-55	.05¼

NORTH TEXAS—

Grade 26-70		.04½
Grade 18-55	.05⅜	.05½

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04⅝	.04¾

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04	.04¼
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04⅝	.04⅝
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04¾	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04⅛	.04¼
42-44	.04¼	.04½

NORTH TEXAS—

41-43	.04⅛	.04¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43		.04½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¾

PENNSYLVANIA (inland refineries)—

45	.05¼	.05⅜
46	.05⅜	.05½
47	.05½	.05⅝

CHICAGO (Based on Group 3)—

41-43	.04	.04¼
42-44	.04¼	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.06

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43	.05¼

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.04	.04⅛
No. 1 straw, 38-40	.03¾	.03⅞
No. 2 straw, 32-36	.03⅝	.03¾
No. 2 dark, 32-36	.03½	.03⅝
No. 3 zero to 15, 28-32	.03⅛	.03¼
No. 3, 15 and above, 28-32	.02⅞	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03¾

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.04	.04⅛
No. 1 straw, 38-40	.03¾	.03⅞
No. 2 straw, 32-36	.03⅝	.03¾
No. 2 dark, 32-36	.03⅝	.03½
No. 3, zero to 15, 28-32	.03⅛	.03⅝
No. 3, 15 and above, 28-32	.02¾	.03

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05¾	.05⅝
*No. 4	.05⅛	.05⅞

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.03⅛	.03⅜
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH TEXAS—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 5, low cold test, 18-22	.80	.82½
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (based on Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.07½	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04⅜	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.25	1.40
24 plus diesel, per bbl.	1.15	1.40
24 plus diesel (bunkers)	1.55	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.90	1.15
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.55	.95
San Joaquin Valley:		
10-18 (tankcars)	.75	1.00
24 plus diesel, per bbl.	1.30	1.50
San Francisco:		
27 plus diesel		1.50
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.20

GULF COAST—

28-30 gas oil	.04¼	.04⅜
28-30 diesel (bunkers)		1.90
Bunkers (bulk cargoes)		.90
Bunker C (bunkers)		1.05

NEW YORK (Bayonne N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼c per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.21
150-160 D, 0-10		.18
150-160 D, 15-25		.17½
150-160 E, 15-25		.17
100-110 D, 0-10		.16
Steam refined:		
631 green (treated)		.16
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 545-550 flash):		
10 pour test	.23	.23½
15 pour test	.22	.22½
20 pour test	.21	.21½
25 pour test	.20	.20½
Steam refined:		
600	.13½	.14
650	.16½	.17
600 Pennsylvania flash	.17½	.18
630 flash	.21½	.22
600 Warren E filtered	.17½	.18

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.06
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07⅛
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale Oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11¼
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.22½	.23
10 pour test	.21½	.22
15 pour test	.21	.21½
25 pour test	.20	.20½
180 vis. at 70° F., 3 color:		
25 pour test	.23	.23½
200 vis. at 70° F., 3 color:		
Zero pour test	.27	.27½
10 pour test	.26	.26½
15 pour test	.25½	.26
25 pour test	.24½	.25

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0295	.0300
124-126 (a.m.p.) w.c. scale	.0300	.0305

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s.	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03½
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.06⅛
60-62 400		.06¼
61-63 390	.06⅛	.06¼
64-66 375		.06⅜

LOS ANGELES—

U. S. Motor grades:		
55-65 octane		.04¾
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05¾	.06¼

KEROSENE

GULF COAST—

41-43 prime white		.04⅞
41-43 water white		.05⅛
44 water white		.05⅜

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.22½	.24½
600 S.R. unfiltered	.20½	.21
630 S.R. unfiltered	.23½	.24
600 flash, S.R.	.24	.24½
630 flash, S.R.	.28½	.29
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.31	.31½
150-3 color	.27	.27½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1 35
Van, Tex.†	1.10
Camp Hill, Tex.	1 27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1 20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.	
Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Corp., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1 18
Iles, Colo., heavy*	1 12
Greybull, Wyo.*	1 30
Torchlight, Wyo.*	1 30
Grass Creek, Wyo., light*†	1 30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1 30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1 33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1 23
Rock Creek, Wyo.†	1 20½
Lea County, N. M. (see West Texas gravity table)	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1 10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1 20
Cat Creek, Mont.	1 40
Cut Bank, Mont.	1 35

*Standard Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La. See note below	
Clay Creek, Tex.	$1 00
Garden Island, La.	1 37
Cleveland, Tex.	1 27
Hardin, Tex.	1.15
Lafitte, La.	1 24
Livingston, Tex.	1 27
Welsh, La.	98
Tepetate (La.) (Jan. 4, 1937)	1 12

Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Middle Western States

OHIO OIL CO.

(Effective January 28, 1937)

Lima	$1 25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich. (July 23, 1937)*	1.27
West Branch, Mich. (July 22, 1937)	1 09
Buckeye (July 23, 1937)	1 24½
Arenac, Mich (July 1, 1937)	1.21
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

*Posted by Pure Oil Co.

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1 37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1 09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tulios and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.

(Effective June 7, 1937)

Bradford, Pa.	$2 82
Allegany, N. Y.	2.82

SOUTH PENN OIL CO

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2 82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2 52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1 42

PENNZOIL CO.

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2 82
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2 81
Includes Tidioute district.	
Group C	2 80
Includes Turkey and Tidioute districts.	
Group D	2 79
Includes Bear Creek and Porkey districts.	
Group E	2 76
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on lengths of pipe line hual to plant at Oil City.	

PURE OIL CO.

(Effective June 7, 1937)

Cabin Creek, W. Va.	2 52
Bradford Hollow, W. Va.	2 52
Kelly Creek, W. Va.	2 52

Canada

Ontario (Sept. 9, 1933)*

Petrolia	$2 10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2 60
Discolored naphtha, 65 gravity and higher	2 36
Discolored naphtha and crude oil, 40-40.9 gravity	1.55
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2 27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.24

*In U. S. currency, f.o.b. ship, based on August spot market transactions.

Kansas Tax Exemption

Governor Huxman of Kansas has ordered auditing of 3,000,000 certificates for exemption of the state gasoline tax, and if fraudulent claims for exemptions are discovered, prosecutions will be made.

Under the Kansas law, gasoline used for nonhighway purposes is tax-exempt. Last year 124,886,000 gallons, or 27 per cent of the total used in the state, paid no tax. Exemptions in other states run around 3 or 4 per cent.

There are 85,000 holders of permits to purchase gasoline tax-free, or one for every eight automobiles.

Texas Wildcats

(Continued from Page 113)

T.&P. Sur., Blk. A (E of B). S.D. for pipe 400 ft.

Bill Cole et al No. 1 J. W. Harris Est., NW cor. county, De La Garza Sur. Drk.

Paul Garrett No. 1 Madry heirs, NE cor. county, sec. 2,572, T.E.&L. Sur. S.D. 470 ft.

Henry Hobbs et al No. 1 Bessie Holt, 4 mi. S. Graford, sec. 1,783, T.E.&L. Sur. S.D. 200 ft.

Lone Star Gas Co. No. 1 Hart Oil Corp., CWL county, sec. 19n, T.&P. Sur., Blk. 3, 4,000-ft. test. Drlg. 2,035 ft.

Earnest Lloyd et al No. 1 Bailey, 3 mi. NE Graford, sec. 2,003, T.E.&L. Sur. S.D. 1,802 ft.

Shackelford County

M. P. Moore et al No. 1 Geo. Gray, W side Bluff Creek pool, sec. 208, E.T.R.R. Sur. L. 1,813-16 ft.; U.R. 6⅝-in.

Owens-Snebold Oil Corp. No. 1 Haterius, sec. 163, B.B.B.&C. Sur. Drlg. 500 ft.

Stephens County

Barnett Pet. Corp. No. 1 J. Q. Corbett, 4 mi. SE Ivan, sec. 3, S.P.R.R. Sur., Blk. 3. Marble Falls 3,994-95 ft.; est. 10,000,000 ft. gas; rng. 7-in. 3,995 ft.

Clark & Cowden et al No. 2 Echols Heirs, Blk. 3. Fsg. 4,017 ft.

Cox & Caprito No. 1 Donnell, 1 mi. SW Eliasville, sec. 1,208, T.E.&L. Sur. Sand 2,956-74 ft.; shot with 40 qts.; tstg.

Dean Bros. & Fortex Oil Corp. No. 1 Watson, 5 mi. SW Caddo, sec. 28, T.&P. Sur., Blk. 6. S.D. 1,175 ft.

W. B. Hamilton No. 1 B. O. Grant, CWL of county, sec. 63, B.A.L. Sur. 2,500-ft. test; drlg. 1,015 ft.

O. J. Perren No. 1 J. K. P. Hughes, NE cor. County of NW¼ sec. 6 A.B.&M. Sur., Abst. 2683. C.O. 1,500 ft.

W. J. Rhodes No. 1 Black Bros., 8 mi. NE Breckenridge, sec. 1,135, T.E.&L. Sur. Drlg. 3,300 ft.

Stonewall County

General Crude Oil Co. No. 1 W. J. Bryan, 7 mi. N Hamlin, Subd. 10, Wm. Vardeman Sur. No. 347. Sd. 4,347-52 ft.; T.D. 4,372 ft.; P.B. to 3,509 ft.

General Crude Oil Co. No. 1 B. F. Harrison, NW cor. D. Harcrow Sur., 1½ mi. N of No. 1 Bryan. Drlg. 1,700 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis, 2 mi. S Arlington, H. Blackwell Sur. S.D.O. 2,140 ft.

Taylor County

Louis Davis No. 1 E. Lincicum, NE cor. county, sec. 21, B.A.L. Sur. T.D. sand 1,998-2,004 ft.; P.O.P.

A. Findley No. 1 Bowles Est., NE cor. county, 389 ft. from E and 608 ft. from S of sec. 26, B.A.L. Sur. Drlg. 1,000 ft.

Throckmorton County

G. C. Foster No. 2 Brown, 5 mi. NW Woodson, sec. 920, T.E.&L. Sur. Sand 4,426-27 ft.; rmg.

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E of Bridgeport, Jas. Couch Sur. 7-in. 3,843 ft.; W.O.C.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Deep, Sabatuma	Gulf Coast	Gulf Coast	Lea County, N. Mex. West Texas except Pecos County,	Mirando district, Texas	Marion County, Texas	Refugio, Greta, Saxet, Taft, Texas	Anahuac, Flour Bluff, Dickson, Turtle Bay	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	$.90	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	....	$.94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.96	....	$1.01	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	1.07	1.07	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.88	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.96	....	1.10	1.10	$.78	1.06	.92	1.11	....	1.10	1.10	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	1.13	1.13	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	1.15	1.15	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	1.17	1.17	.96
Bel. 29	$1.06	....	$.96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	1.19	1.19	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	1.21	1.21	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	1.23	1.23	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	1.25	1.25	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	1.27	1.27	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1.31	1.26	1.29	1.29	....
36-36.9	1.22	1.22	1.12	1.19	1.14	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1.33	1.28	1.29	1.29	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1.35	1.30	1.29	1.29	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1.37	1.32	1.29	1.29	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	1.39	1.34	1.29	1.29	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	1.29	1.29	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.

Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.

Column 3—All purchasers.

Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.

Columns 5, 6, 7 and 8—All purchasers.

Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)

Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)

Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.

Column 12—All purchasers.

Column 13—All purchasers (effective July 6, 1937).

Column 14—Magnolia Petroleum Co.

Column 15—Humble Oil & Refining Co. (effective July 6, 1937).

Column 16—Humble Oil & Refining Co. prices start at 30-30.9 gravity at $1.16 adding 2 cents for each degree upward to and including 40 and over at $1.36.

Columns 17 and 18—Shell Petroleum Corp.

Column 19—Tide Water Oil Co.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ending Sept. 18 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	71¾	5,300	78	71¾	75	Amerada Corp.	788,675	N.P.	50cQ	7-31-37	$2.00	125½	75	80	48½
37	23¼	14,000	25½	23¼	24⅜	Atlantic Refining	2,664,000	$25	25cQ	9-15-37	1.25	35⅛	26⅝	28	20⅛
43⅜	20	9,700	23⅛	20	22	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11⅝
35¼	16⅞	17,900	20⅝	18	19	Barnsdall Oil Co.	2,247,974	$5	25cQ	8-2-37	.80	28¼	14⅛	14⅜	5⅞
20⅞	10	58,700	11⅞	10⅛	10⅜	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-37	.40	23⅜	14	15⅜	3⅜
17⅞	12	58,800	13½	12	12½	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	11-15-37	.80	17¼	11½	12¼	6½
49	36⅜	17,800	40½	37¼	38¾	Continental Oil of Delaware	4,682,615	$5	50cQ†	9-30-37	1.50	44⅞	28⅛	35	15⅛
17⅝	10	26,800	11⅝	10	10⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	23½	10,700	27	23½	24	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9⅛
34	20	3,800	22¼	20	20	Mission Corporation	1,399,345	N.P.	1.00	6-15-37	.45	29⅞	16⅜	17⅜	10⅝
41⅜	24	18,700	30¾	24	27¼	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	14¾	24,600	16¾	15	15¼	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	16	3,200	19½	16	18½	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11⅜	14	6⅜
4½	1⅜	1,300	2	1½	2	Panhandle P. & R.	198,770	N.P.	....	....	....	4¼	1⅜	1⅞	½
64	49½	22,100	55	49¾	50¾	Phillips Petroleum	4,449,052	N.P.	75cQ†	9-1-37	2.50	52⅝	38⅛	40	13¾
29⅞	20	4,100	22	20	21¾	Plymouth Oil Co.	1,050,000	$5	35cQ	9-30-37	.90	27¾	11⅞	13	6½
24¾	15⅜	59,900	17½	15⅜	16⅛	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	28⅝	3,900	31¾	28⅝	29	Seaboard Oil of Delaware	1,224,283	N.P.	25cQ	9-15-37	1.00	44	30½	36⅞	20¾
34⅜	21¼	9,800	23¼	21¼	21⅝	Shell Union Oil	13,070,625	N.P.	50c	7-15-37	.25	28¼	14¾	16½	5½
105⅜	102	700	105⅛	104⅛	105⅛	Shell Union Oil 5½% pfd.	343,500	$100	$1.37½Q	10-1-37	28.87½	127½	102	111	63⅛
4¼	3	700	3	3	3	Simms Petroleum	461,698	$10	50c liq.	8-3-37	2.25 liq.	6¾	3½	18¾	4¾
60⅝	39⅜	5,000	43⅞	39⅜	41¼	Skelly Oil	1,006,348	$15	50c	9-30-37	....	47⅜	19½	20½	6½
23¼	16¼	94,200	19¾	18	18⅛	Socony-Vacuum	31,151,071	$15	25cSA	9-15-37	.70	17½	12½	15⅜	10⅝
50	37¾	15,000	40½	37¾	39	Standard Oil of California	13,014,754	N.P.	45cQ†	9-15-37	1.20	47⅝	35	41⅛	27¾
50	37	18,000	41¼	37⅝	40	Standard Oil (Indiana)	15,196,241	$25	50cQ†	9-15-37	2.40	48½	32¾	33⅜	23
36½	30⅝	No sales ..	..	..	..	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	57¼	30,500	61⅞	57¼	59¾	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅝	51⅛	52⅝	35¾
77½	64½	900	65⅝	64½	64½	Sun Oil	2,156,825	N.P.	25cQ	9-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	49½	55,800	54	49½	50	Texas Corp.	10,896,858	$25	50cQ	10-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	4⅝	14,300	5¾	4⅞	5¼	Texas Gulf Producing Co.	888,131	N.P.	5c	12-15-36	.05	8⅞	4⅜	4¾	2½
16⅝	9⅝	24,400	12¼	9⅝	10⅞	Texas Pacific Coal & Oil	888,237	$10	10c	9-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	14,700	18	16½	16¾	Tide Water Associated	6,288,512	N.P.	35cQ†	9-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	20¾	11,900	22⅞	20¾	21⅞	Union Oil of California	4,386,070	$25	30cQ	8-10-37	1.00	28½	20¾	24	14¾
31½	24¾	1,400	25¾	24⅞	24⅞	Union Tank Car Co.	1,200,000	N.P.	40cQ	9-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	2¾	13,600	3⅛	2¾	3⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	...	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ending Sept. 18 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	13½	3,700	15½	13½	14	Bridgeport Machine Co.	260,000	N.P.	25c	6-30-37	$1.00	21	13¼	14⅛	3¾
51½	45	No sales ..	..	..	..	Buckeye Pipe Line Co.	200,000	$50	$1Q	9-15-37	3.25	50	39¾	42½	30½
2¾	1¼	6,300	1⅜	1¼	1¼	Carib Syndicate	799,020	25c	....	....	....	4⅞	1⅞	4¼	1⅝
123	106	200	109	108	108	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	9-30-37	7.00	124¾	105	157	115
5⅜	2¼	61,800	2⅝	2¼	2⅜	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅝	3	3¼	¾
5½	2⅞	8,300	4¼	2⅞	3⅞	Cosden Petroleum	399,687	$1	....	.....	....	4½	1½	1½	¼
38¾	28¼	9,100	31½	28¼	28½	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	10	3,300	10¼	10	10	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅞	4
8⅜	4⅝	2,400	5⅝	4⅞	5¼	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	¾
47½	29	150	30	29	30	Eureka Pipe Line	50,000	$50	$1Q	8-2-37	4.00	47½	38½	38	33¼
63½	47¾	10,800	53	47¾	48⅝	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	70⅞	3,400	76⅝	70⅞	74	Humble Oil & Refining	8,923,935	N.P.	62½cQ	10-1-37	1.50	80	57	64	44
24¼	18⅜	6,400	20	18⅜	19¾	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	100	8	8	8	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	29¾	8,300	33⅛	29¾	31⅞	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	9	13,800	11	9⅜	9¾	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	9-15-37	.50	15⅜	9⅞	11⅜	4⅜
34	16⅛	15,400	28	22½	23⅞	Lion Oil Refining	270,000	N.P.	25cQ	10-20-37	.75	17¾	7⅜	8⅛	3½
14¼	9	7,400	9¼	9	9⅛	Lone Star Gas	5,382,723	N.P.	20c	8-21-37	.60	14¼	9⅞	10⅞	4½
14⅝	8¼	1,100	8¾	8½	8¾	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7⅞	5¼	2,300	5⅞	5⅜	5¾	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅜	5	5¾	4⅛
19½	14	2,000	14¾	14	14⅝	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-37	1.00	23	17⅜	20	11¾
12½	8	1,400	9⅝	8	9½	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15¾	9¼	10⅝	6¾
6⅛	4¼	No sales ..	..	..	..	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	1¾	2,200	2	1¾	2	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4¼	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	4-15-37	.35	6¼	4¼	4⅞	3
12¾	7½	200	7¾	7¾	7¾	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	47,100	6⅜	5⅝	6⅛	Pantepec Oil	1,608,700	N.P.	....	.....	....	10⅛	3¼	4⅜	1¼
13¾	4¼	3,900	6¼	4¼	5½	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	3⅞	600	4¼	4	4	Ryan Consolidated	296,931	N.P.	....	....	....	4¾	1⅞	2½	⅝
56	42	1,500	49	46½	46½	South Penn Oil	1,000,000	$25	$1.15Q†	9-30-37	2.60	44	32½	34½	21⅝
7¼	4⅞	100	5	5	5	Southern Pipe Line	100,000	$10	25cSA	9-1-37	.25	7⅞	3¼	5	3⅞
42	26	No sales ..	..	..	..	South West Penna. Pipe Lines	35,000	$50	50cQ	7-1-37	13.00	60	44	56	44¼
21⅛	18¾	2,800	19⅛	18¾	18¾	Standard Oil of Kentucky	2,604,790	$10	40cQ†	9-15-37	1.35	23⅜	17⅛	24	18
13¾	8⅞	No sales ..	..	..	..	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7⅞
45	28	800	32½	31	32	Standard Oil of Ohio	753,740	$25	25cQ	9-15-37	2.00	40	21¾	23⅝	11½
4⅞	3½	11,400	3¾	3½	3½	Sunray Oil	1,910,119	$1	10c	8-20-37	.10	5	2⅝	2⅞	⅞
7⅝	4⅝	2,200	5	4⅝	5	Texon Oil & Land	336,028	$2	15cQ	9-3-37	.60	9¾	5⅜	6⅞	5

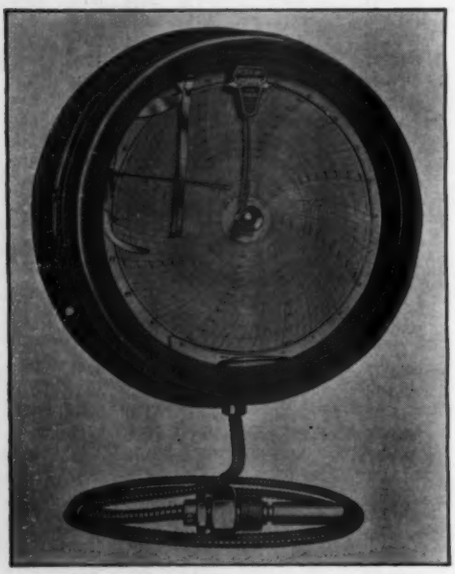
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Latest Foxboro Development Is Mono-Therm Thermometers

A modernized line of indicating and recording thermometers, incorporating improvements in de-



sign, construction and operating characteristics is being introduced by the Foxboro Co., Foxboro, Mass. These Mono-therm thermometers employ a thermal system which provides a complete permanent seal for the actuating medium. The entire system is either welded or braised in such a way that it becomes an integral piece of metal. This new construction reduces to a minimum any possibility of leaky joints which would affect accuracy of the instruments. Even with mechanical shocks, continued vibration and overrange temperatures, a tight thermal system is assured. The Mono-therm construction is being applied to Foxboro thermometers of the vapor-pressure, gas-filled and liquid-filled types. All are so designed that the charts may be changed easily with one hand.

The liquid-filled instrument can be protected against an overrange up to a maximum of 500° F. That is, 250° F. can be protected to 500° F.; 350° F. can be protected to 500° F. Similarly, the gas-filled instrument can be protected against an overrange of 100 per cent up to a maximum of 1,000° F. The vapor-pressure type can be protected for a 100 per cent overrange to the breakdown point of the actuating medium.

Here and There With Men Who Manufacture Equipment

Julio F. Sorzano, manager of the industrial division of the Walles Dove-Hermiston Corp., New York City, announces the appointment of the following additional distributors for that company's Bitumastic and other protective coatings for industry: Air Associates, Inc., of Garden City, N. Y.; Curry Brothers Oil Co., of Boston, Mass.; Kasper & Koetzle, Inc., of Brooklyn, N. Y., and Read & Lundy, Inc., of Providence, R. I.

Iron & Steel Products, Inc., Chicago, has obtained the services of Jack Ryan, for many years with the Texas Co., and Bill Rosser, formerly with Symington Corp. and latterly with Bradford Corp., as special sales representatives with headquarters in its city sales office, Room 657 Railway Exchange, Chicago.

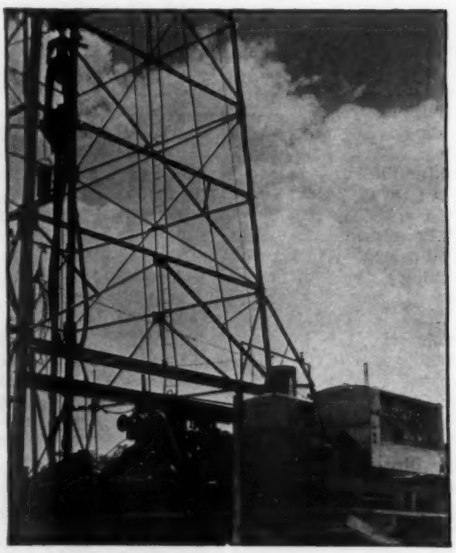
Wico Electric Co., Springfield, Mass., has appointed H. L. Hart as general sales manager. Mr. Hart has been with Wico for many years and opened the Tulsa branch in 1919. He has served in various capacities, including purchasing agent in the home office and for the past few years has been divisional sales manager in Chicago, before returning to the home office in July.

R. D. Shaw, sales manager for Dowell, Inc., is on a tour planned to include inspection of the company's operations in Montana, Wyoming and Alberta, Canada. Mr. Shaw is accompanied by his family, and will spend a vacation at Lake Louise, Alberta, Glacier National Park and Yellowstone National Park before returning to his office in Tulsa.

W. P. White, with offices at 1208 North Broad Street, Philadelphia, Pa., has been appointed district manager in charge of steel and tube sales in the eastern and southern Pennsylvania district by the steel and tube division of the Timken Roller Bearing Co. C. H. Kuthe will assist Mr. White. A. R. Adelberg, 165 Broadway, New York, will supervise steel and tube sales in the Philadelphia district as well as New York.

Steel & Tubes, Inc., subsidiary of Republic Steel Corp., Cleveland, Ohio, has opened a branch office in Baltimore, Md. H. H. Smith is in charge.

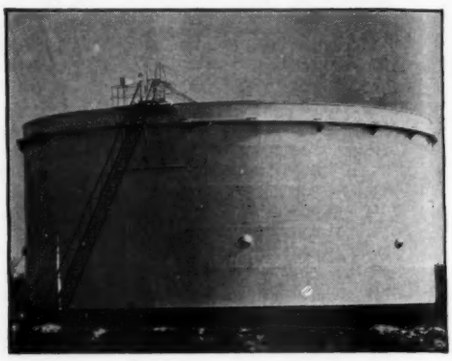
The Linde Air Products Co., unit of Union Carbide & Carbon Corp., has opened a sales office in Oakland, Calif., at 3710 San Pablo Avenue. This brings the number of Linde offices to 33.



Four "Caterpillar" D13000 diesel engines on a Lupher Drilling Co. rotary rig near Xenia, in the new southeastern Illinois field. Two engines on two 6 by 16 Wilson-Snyder mud pumps each use 4½ to 5 gallons of fuel an hour, and two engines compounded for driving Wilson portable-rig draw works and rotary table each use 3 to 4 gallons. Lupher has another rig identical with this.

Wind-Girder Stiffens Oil Tank When Its Contents Run Low

The installation shown here is at the Lima, Ohio, station of the Buckeye Pipe Line Co. The tank, 78 feet 9 inches in diameter and 40 feet 7 inches high, equipped with a Wiggins pontoon roof, has a capacity of 35,000 bbls. and is of butt-welded construction throughout. This view illustrates the present method of placing the wind girder around the out-



side of the tank approximately one-half the width of a plate from the top of the tank-sheel. This wind-girder is required to stiffen the tank-shell at times when the tank is not full of oil and the roof is riding near the bottom.

The small projections on the outside of the tank-shell are used to provide connections for links which support the roof when it is desirable to hold the roof a short distance off the bottom of the tank for cleaning or inspection.

Pump Control Is Combined in Unit With Low-Water Cutoff

A boiler control unit which is a combination pump control and low-water cutoff in one unit has been announced by McDonnell & Miller, Wrigley Building, Chicago. The unit is designed for use with steam pressures up to 150 pounds. These two controls have distinctly separate operating levels, and the differential between the "off" and "on" operations of the controls is adjustable. A flexible metallic bellows gives dependable transmission of float power to the outside switch mechanism and eliminates the use of stuffing-boxes.

The pump control circuit is designed to turn on and off an electrically driven boiler feed pump in accordance with the requirements of the boiler. At a lower level, a second separate circuit will shut off the oil burner or stoker in case of a fuse failure in the pump circuit.

Lane-Wells Merger

The Lane-Wells Co., of Delaware, has been formed to take over the assets of the Lane-Wells Co. of Oklahoma; Lane-Wells Co. of California; Technicraft Engineering Corp. of California; Lane-Wells Co. of Texas; Lane-Wells International, Inc., and Alexander Anderson, Inc., the last two of California.

Power Transmission Chain Is Announced by Link-Belt

Announcement is made by Link-Belt Co., Indianapolis, Ind., of the development of a new power transmission chain, known as SS-3125 Hyper, for high-speed rotary drilling service. This chain is of 3.125-inch pitch and operates on cut-tooth wheels. It is made in single and double widths, the single chain having an ultimate strength of 115,000 pounds, and the double-width chain, 230,000 pounds.

The new chain is designed to withstand the high speeds and heavy loads encountered in present-day drilling service. The single width chain is employed on rotary tables and other equipment; the double chain on heavy-duty hoist and engine drives. Cut-tooth steel sprockets with correct tooth design, properly heat-treated, can be furnished. The new chain is illustrated and described in detail in a new bulletin, Folder No. 1525, recently released by the company.

Named Export Representative

Guy E. Daniels, 30 Rockefeller Plaza, New York, has been appointed export representative of the Green Head Bit & Supply Co., Oklahoma City, Okla. Mr. Daniels for 10 years was located in Maracaibo, Venezuela, with the Shell Petroleum Corp. While in the purchasing department of Shell Mr. Daniels spent nine years in the field, which gave him first-hand knowledge of oil-field tools and equipment. Before going with Shell Mr. Daniels was with the Union Oil Co., California. The Green Head Bit & Supply Co. is now marketing its bits as well as line scale in both export and domestic fields.

Bulletins, Booklets and Other Literature for the Trade

A folder from Haveg Corp., Newark, Del., describes the company's standard size pipe, fittings, valves and fume duct. In addition to giving complete mechanical details it also includes a table of chemical resistance properties. This bulletin should be of interest to anyone having to do with the handling of corrosive liquids or fumes.

A 12-page catalog, No. 20, "Pipe Line Equipment," has been completed by American Steel Works, of Kansas City, Mo. Complete data on American's pipe line equipment is given and on its Models H, T and R heating kettles which have been completely redesigned.

Wilson Manufacturing Co., Wichita Falls, Tex., has issued a new eight-page bulletin, No. 120, describing its Titan Model portable rotary rig. Specifications and information regarding the chain transmission, general arrangement and continuity of service are given for the Titan Model. Detailed specifications of other Wilson portable rotaries are also given.

The Billings & Spencer Co., Hartford, Conn., has issued a circular containing information on its forged pipe tools and fitting tools. One of its chain pipe wrenches, "The Gardnerench," may be used on both pipe and fittings, and may be reversed without removing the chain.

A new edition of the 68-page insulation booklet, "Barriers to Industrial Waste," has been published by Johns-Manville, 22 East Fortieth Street, New York. It contains an improved table of recommendations to serve as a guide to the proper selection of J-M insulations in practically all industries.

A bulletin describing its improved Type G-SD, two-cycle vertical pumping engine has been released by the Cooper-Bessemer Corp., Mount Vernon, Ohio. The engine, which is featured by its light weight, compact, rugged construction, operates with either gas or oil.

Model 36-A diesel generating sets are the subject of a 16-page booklet sent on request by Fairbanks, Morse & Co., Chicago.

Data sheets covering the many types of flexible couplings manufactured by the Ajax Flexible Coupling Co., Westfield, N. Y., are given in a 16-page booklet obtainable from the company.

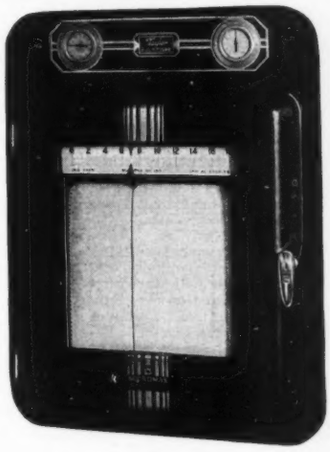
A bulletin mailed on request by the Surface Equipment Co., 524 North Trenton Avenue, Tulsa, describes the Seco T-bar hook-off.

In a new bulletin, "Rotary Displacement Meters," the Roots-Connersville Blower Corp., Connersville, Ind., describes not only the general operating principles of the meters, but also lists meters for smaller volumes than in previous bulletins.

Arguing against the practice of opening branch stores at oil-country cross roads as compelling active stores to carry the losses of inactive ones, the Bridgeport Bulletin, published by the Bridgeport Machine Co., Wichita, Kans., says: "Figure it any way you will, when poor relatives move in, the grocery bill goes up."

Fulscope Micromax Controller Is New Taylor Development

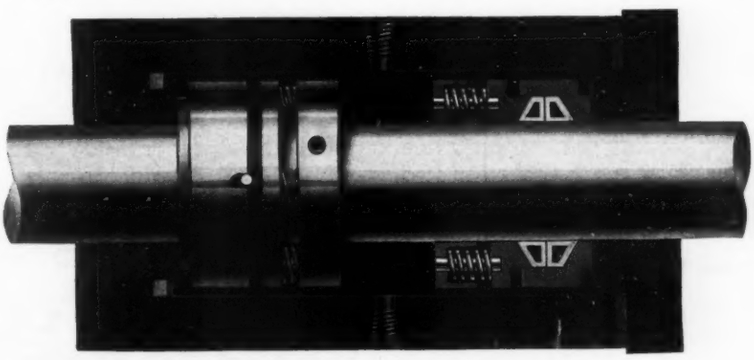
For process control problems where smooth, proportional valve action is imperative and the potentiometer principle of temperature measurement is preferred, the Taylor Instrument Companies, Rochester, N. Y., now offer the Fulscope Micromax air-operated potentiometer controller. The device utilizes the same completely adjustable, air-operated control mechanism that is used in the thousands of Fulscope temperature, pressure, rate-of-flow, and liquid-level controllers in service.



The temperature-measuring system is the well-known Micromax recording and indicating potentiometer, in which all functions affecting accuracy of temperature measurement are fully automatic. The principal parts of both mechanisms are interchangeable with the many Fulscope and Micromax instruments now in use. This permits small stocks of replacement parts, lower maintenance costs, and better service. The Fulscope control unit operates in conjunction with the Taylor Motosteel diaphragm valve.

EFFECTIVE SEALING IS PROVIDED BY NEW PRODUCT

Dura Seal, brought out by the Durametallic Corp. of Kalamazoo, Mich., is a commercial seal for centrifugal pumps with one element stationary and the other rotating with the shaft. The rotatable member consists of three rings. First a collar is set onto the shaft with one or more set-screws. Ahead of this is a compression-ring, which receives its forward impulse against a shaft packing from a number of springs between the collar and the compression-ring. In front of the compression-ring is the "seal ring." Within this seal ring is a chamber for shaft packing to prevent leakage along the shaft. This packing is stationary in relation to the shaft, although it rotates in unison with it as do all the three rings comprising the rotating member.



Gaskets, or packings, in the grooves of the stationary member prevent leakage along the stuffing-box wall. The only other avenue of escape is between the face of the stationary member and the face of the seal ring of the rotating unit. Sealing is provided by a ground and lapped joint.

This seal is said to have given service for long periods on pumps having shafts rotating 3,600 R. P. M., operating under temperatures as high as 550° F., and otherwise difficult to seal because of grit or corrosion. Dura Seal may be made of any material that can be machined or ground, and the manner in which it is constructed makes it grit-proof. Special devices provide lubrication to the sealing faces, although in many instances this is not necessary. One of the more recent achievements reported is the sealing of propane within high-pressure and high-speed centrifugel pumps by providing two complete Dura Seals in each stuffing-box.

CLASSIFIED ADVERTISING

Leases and Drilling Blocks

PERMIAN BASIN
1,000 ACRE DRILLING BLOCK
Located on subsurface high between Howard-Glasscock and Mertzon, shallow pools of West Texas. Howard-Glasscock has produced 76,000,000 bbls. in last six years. Block is center of recent activity, both majors and independents taking leases, four wells will start next 30 to 60 days. Production possibilities evidenced by noticeable odor of gas escaping through fissures. Humble paid cash bonus for renewal of lease two miles northwest. Will give six-eighths of oil and gas for 2,600 ft. well.
ADDRESS
Box 1082, Austin, Texas.

NEW Texas Oil and Gas Leases. Large or small tracts for brokers and salesmen. State requirements. H. H. WHITE, P.O. Box 674, San Antonio, Texas.

WANT BROKER to handle commercial leases near deep test. Good geological location South Texas. Owner, Box 149, Belton, Texas.

OWN drilling block south Young Co. Texas near big production. Will sell interest to develop or give acreage for development. Excellent possibilities for big production. Adress OWNER, 617 Petroleum Bldg., Fort Worth, Tex.

OIL LEASE—109 acres adjoining discovery well in Anderson-Kerr pool. 3 mi. S. E. Gainesville, Texas. Address Box H-950, The Oil and Gas Journal, Tulsa, Okla.

SECURITY ABSTRACT COMPANY
El Dorado, Arkansas
Fee, Lease & Mineral Ownership on short notice. Ownership maps.

ILLINOIS
A complete weekly report on Illinois operations.
One month $5.00
Six months $25.00
Sample report on request.
OIL NEWS SERVICE
P. O. Box 146 Flora, Illinois

PRODUCTION 30 barrels, Osage County, high gravity, four wells, 160 acres, pumping central power, all good equipment, price $20,000. Write, Box 1195, Abilene, Texas.

LEASES-ROYALTIES near Paluxy-Trinity sand test East Texas offer chance for quick money. E. CROFT, PROCTOR, TEX

OWN shallow producing lease Archer Co. Texas offset locations. Will sell interest and develop. Excellent investment. Address OWNER, 617 Petroleum Bldg., Fort Worth, Texas.

ARKANSAS
Does not have any production (proration) restrictions. The opportunity for quick "payouts" is obvious. Come here and investigate royalty and lease opportunities
WILLIAM MONROE LAYTON
P. O. Box 411 Texarkana, Ark

CAN FIND any oil structure that will produce when penetrated. P. O. Box 303 Tonkawa, Oklahoma.

$5.00 per acre for a one-fourth interest in 1,040 acres. Price $5.00 per acre. ELTON BECK, Herrick, Illinois.

320 A. PROVEN GAS. ⅞ working interest. Unlimited 8-cent market. I complete one well and assign all for $1,500.00. H. B. Buddenborg, Osawatomie, Kans.

IF YOU HAVE proven or semi-proven leases or acreage subject to lease in southeastern Illinois and have a reasonable proposition to offer for quick development, address P. O. Box 415, Atkins, Arkansas.

HAVE 17,000-acre block that is believed over subsurface structure but will take geophysical survey to determine. Will make any reasonable deal with responsible party to develop. Address W. M. PRATHER, Oakley, Kansas.

New Mexico OIL LEASES WHOLESALE
40 acres at a time.
Roy G. Barton, Clovis, New Mexico.

Leases and Drilling Blocks

OFFERING——DRILLING BLOCKS
40 acres tracts near tests.
SYDNOR'S OIL OFFICE
226 Bewley Bldg., Fort Worth, Texas

I OWN 3,000 acres free in N. Pittsburgh & Atoka Cos. 40 to 1,000 A. tracts, no trades. Cash sale, lease or royalty, $5 to $25 per A. Townsite on 2 R.R.S. near production. J. E. Cavanaugh, Baker, Oregon.

FOR SALE Oil producing leases with many locations yet to drill, leases for sale near production and wildcat leases for drilling contracts.
W. P. HARLEY
Bowling Green, Ky.

FOR SALE or exchange—Producing and distributing natural gas properties in western Missouri and eastern Kansas. Fine condition. Great development possibilities. Exchange for producing oil wells acceptable. LOUIS C. CYR, 45 Melrose St., Lawrence, Massachusetts.

Specializing leases twenty acres up dollar acre, East Tex., La., S. Ark. Owners—Attorney, Box 1122, Little Rock, Arkansas

Mailing Lists

ROYALTY INVESTORS, by deed. Speculators in low priced leases. Both by states. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

ROYALTY OWNERS
Names and addresses in any State.
Royalty Lists, Box 105, Ft. Worth.

Royalties

Oil Royalties and Oil and Gas Leases
Bought and Sold
E. T. Marion
1109 Petroleum Building
Midland, Texas.

REPRESENTATION WANTED for Calif. Oil Royalties. California Oil Syndicate, Inc., 1541 N. Western, Los Angeles, Calif.

WANTED—A large and widely scattered spread of producing royalty. Also 10 to 20 acres royalty near several wells drilling on geophysical structure, by responsible operators. Cash ready quick action. Leonard Jones, 4172 Leimert Blvd., Los Angeles, Calif.

Oil Royalties and Leases Illinois Basin.
Write
Sam B. Raitman Olney, Ill.
226½ Main St. P. O. Box 229

FOR SALE—Approximately 20 acres of ⅛ royalty Liberty County, Texas. Price $225.00 per acre. Address Box H-961, The Oil and Gas Journal, Tulsa, Okla.

Royalties

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties.
522 Fifth Avenue, New York, N. Y.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

FOR SALE—400 acres producing Osage field, Wyoming, 41° gravity paraffine base crude. Carries 12½% royalty. 25 bbls. daily settled production. 50 proven locations at 1400 feet. Deeper sands untested. W. M. Sayre, Osage, Wyo.

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER
Patents Obtained — infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to any one, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Help Wanted

GENERAL MANAGER WANTED
To take charge of drilling gas wells, building pipe lines and distribution systems, leasing more acreage. Investment of ten thousand required for substantial interest. Good salary. Address Box H-962, The Oil and Gas Journal, Tulsa, Okla.

Situations Wanted

ASSISTANT ENGINEER, Chief topographic draftsman formerly with U. S. Engineers, 15 years experience in Topographic, Aerial and Geologic mapping. Desires connection with large corporation in exploration or geologic Dept. U. S. A. or Foreign. Single, employed. Available on short notice. Interview can be arranged. Address Box H-956, The Oil and Gas Journal, Tulsa, Okla.

GRADUATE Civil Engineer, 1930, experienced in land acquisition, geodetic surveys and aerial photogrammetry; Texas and southwest. Licensed land surveyor. Now employed U. S. civil service; seeking position with increased responsibilities and opportunities. Adress Box H-951, The Oil and Gas Journal, Tulsa, Okla.

MAN experienced in land, leases, right-of-way, title and claim work. P. O. Box 1666, Beaumont, Texas.

ATTORNEY, A. B. and LL. B. degrees, desires position with reputable firm. Married, 31, honest, capable and now living in Denver. Five years practice in Colorado and two years experience with corporation as adjuster of complaints. Will accept position in any department. Good health. Gentile. Address Box H-954, The Oil and Gas Journal, Tulsa, Okla.

YOU have your organization and can give good service. Does the Billion Dollar Petroleum Industry know it? Have you made it easy for oil men to order from you? If not, the surest and best way to promote the merits of your company is to use The Oil and Gas Journal—the oldest and best petroleum publication in the world.

REFINERY SUPERINTENDENT, 20 years skimming and cracking experience, now employed, desires new surroundings. Address Box H-955, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED engineering salesman, headquarters in New York City and with wide acquaintance and contacts in the oil industry, is prepared to actively and aggressively represent several manufacturers of oil production and refinery equipment of merit for both domestic and export sales, with both personal and sales organization efforts. Only proven high class equipment will be considered. Address Box H-960, The Oil and Gas Journal, 415 Lexington Ave., New York, N. Y.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*
7 Lines	*$2.45*	*$4.20*	*$5.95*	*$7.70*
8 Lines	*2.80*	*4.80*	*6.80*	*8.80*
9 Lines	*3.15*	*5.40*	*7.65*	*9.90*
10 Lines	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma